



# MSMR

Medical Surveillance Monthly Report



Vol. 8 No. 2

March/April 2002

U  
S  
A  
C  
H  
P  
P  
M

## Annual Summary, US Armed Forces - 2001

### *Contents*

Hospitalizations among active duty personnel .....	2
Ambulatory visits among active duty personnel .....	9
Reportable medical events among active duty personnel .....	14
Acute respiratory disease surveillance, US Army .....	22
Relative burdens of selected illnesses and injuries.....	24
Characteristics of active duty personnel.....	28

Current and past issues of the MSMR may be viewed online at: <http://amsa.army.mil>

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>APR 2002</b>		2. REPORT TYPE		3. DATES COVERED <b>00-03-2002 to 00-04-2002</b>	
4. TITLE AND SUBTITLE <b>Medical Surveillance Monthly Report (MSMR). Volume 8, Number 2, March/April 2002</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army Center for Health Promotion and Preventive Medicine, Armed Forces Health Surveillance Center (AFHSC), 2900 Linden Lane, Suite 200, Silver Spring, MD, 20910</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>32</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

## Hospitalizations among Active Duty Members, US Armed Forces, 2001

This report summarizes frequencies, rates, trends, and characteristics of hospitalizations of active duty members of the US Armed Forces during calendar year 2001. The illnesses and injuries that caused hospitalizations are summarized based on primary diagnoses at times of discharge (coded in accordance with the International Classification of Diseases, 9<sup>th</sup> Revision, Clinical Modifications [ICD-9-CM]). All data were derived from Standard Inpatient Data Records maintained in the Defense Medical Surveillance System.

*Frequencies, rates, and trends.* During calendar year 2001, there were 60,148 hospitalizations of active duty servicemembers worldwide. During 2001, there were fewer than half as many hospitalizations as in 1993, fewer than two-thirds as many as in 1997, and approximately 4.5% fewer than in 2000 (table 1).<sup>1</sup> The crude hospitalization rate in 2001 was 44.4 per 1,000 person-years. This rate is more than 50% lower than the rates from 1991 to 1996 and more than 20% lower than the rates from 1998 to 2000 (figure 1).<sup>1</sup>

*Hospitalizations, by illness and injury categories.* The illnesses and injuries that accounted for hospitalizations in 2001 differed from those of the recent past. For example, in 2001, pregnancy-related conditions (24%) and mental disorders (15%) accounted for more hospitalizations than any other major categories (table 1). In contrast, in 1993, musculoskeletal and digestive disorders were the leading causes of hospitalizations of servicemembers; and in 1997, pregnancy-related conditions and musculoskeletal conditions were the leading diagnostic categories. Still, the five categories that accounted for the most hospitalizations in 2001 were identical to those in 2000.<sup>1</sup>

*Hospitalization rates, by gender.* In 2001, the hospitalization rate for all causes among women (crude rate: 120.6 per 1,000 person-years) was almost 4-times higher than the rate among men (crude rate: 31.2 per 1,000 person-years). However, when pregnancy-related conditions were excluded, the hospitalization

rate among women (crude rate: 49.2 per 1,000 person-years) was approximately 1.6-times higher than the rate among men. For most categories of illnesses and injuries, hospitalization rates were higher among women than men; however, men were hospitalized at higher rates than women for “injuries and poisonings” and “disorders of skin and subcutaneous tissue” (figure 2).

*Hospitalization rates, by age.* Relationships between age and hospitalization rates varied across major diagnostic categories. For example, rates generally declined with age for mental, infectious, and respiratory conditions; however, they generally increased with age for digestive, musculoskeletal, genitourinary, circulatory, neoplastic, and endocrinologic conditions (figure 2).

*Most frequent diagnoses.* The diagnoses that accounted for the most hospitalizations among males were “adjustment reaction” (n=2,665), “affective psychoses” (n=1,160), “acute appendicitis” (n=1,104), “intervertebral disc disorders” (n=1,027), and “internal derangement of knee” (1,025) (table 2). Among females, the non-pregnancy-related diagnoses that accounted for the most hospitalizations were “adjustment reactions” (n=925), “affective psychoses” (n=486), “uterine leiomyoma” (n=369), “other symptoms of the abdomen and pelvis” (n=271), and “dentofacial anomalies,” including “malocclusion” (n=248) (table 3). Thus, psychiatric disorders were leading causes of hospitalizations among both male and female servicemembers.

*Days per hospitalization.* There was not much variability in median lengths of hospitalizations across diagnostic categories; however, ranges of hospital stays did significantly vary across categories. Among major categories, mental disorders accounted for the widest range of hospital stays (figure 4). In the past three years, ranges of hospital stays have remained fairly stable; however, lengths of hospital stays have decreased significantly since the early- to mid-1990s (figure 4).

*Natures of injuries and poisonings that resulted in hospitalizations.* In 2001, injuries and poisonings accounted for the third most hospitalizations of servicemembers among all major diagnostic categories. More than 90% of all injuries and poisonings that resulted in hospitalizations were “unintentional”: most of these were related to “falls and miscellaneous,” “land transport,” and “complications of medical care” (table 4). Approximately 9% of injuries and poisonings were

“intentional” (e.g., self-inflicted injuries/poisonings, fighting, combat-related wounds) (table 4).

*Data analysis and report by Garret R. Lum, MPH, Analysis Group, Army Medical Surveillance Activity.*

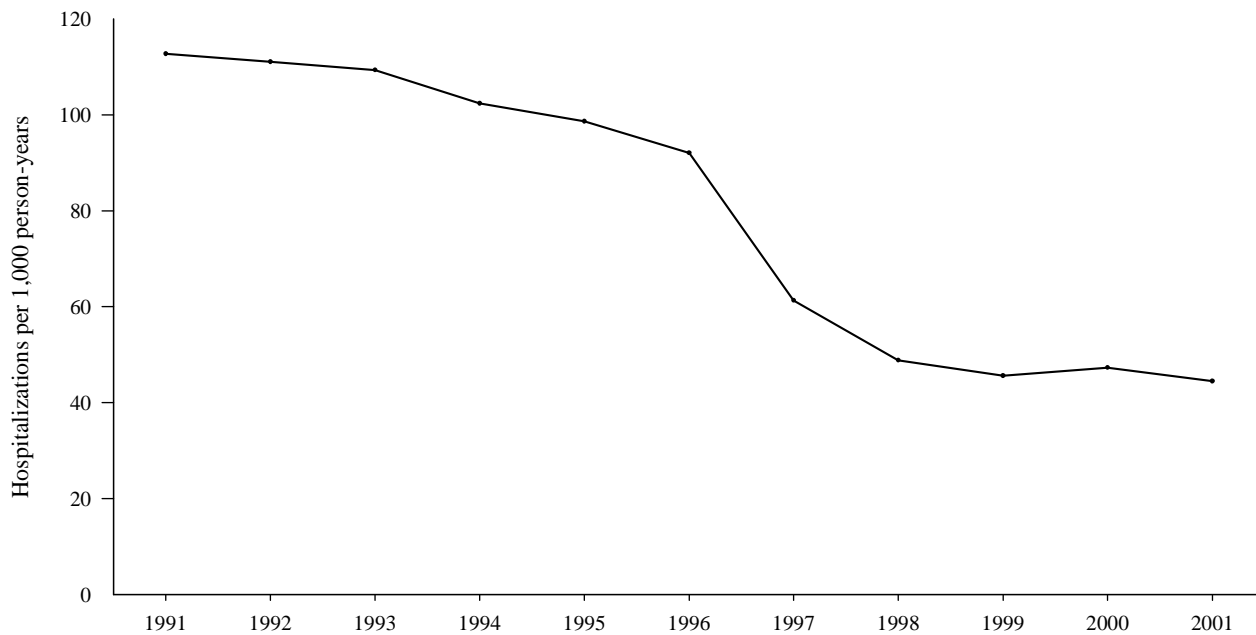
#### References

1. Lesikar SE. Hospitalizations among active duty personnel—2000. *Medical Surveillance Monthly Report* 2001;7(4):2-7.

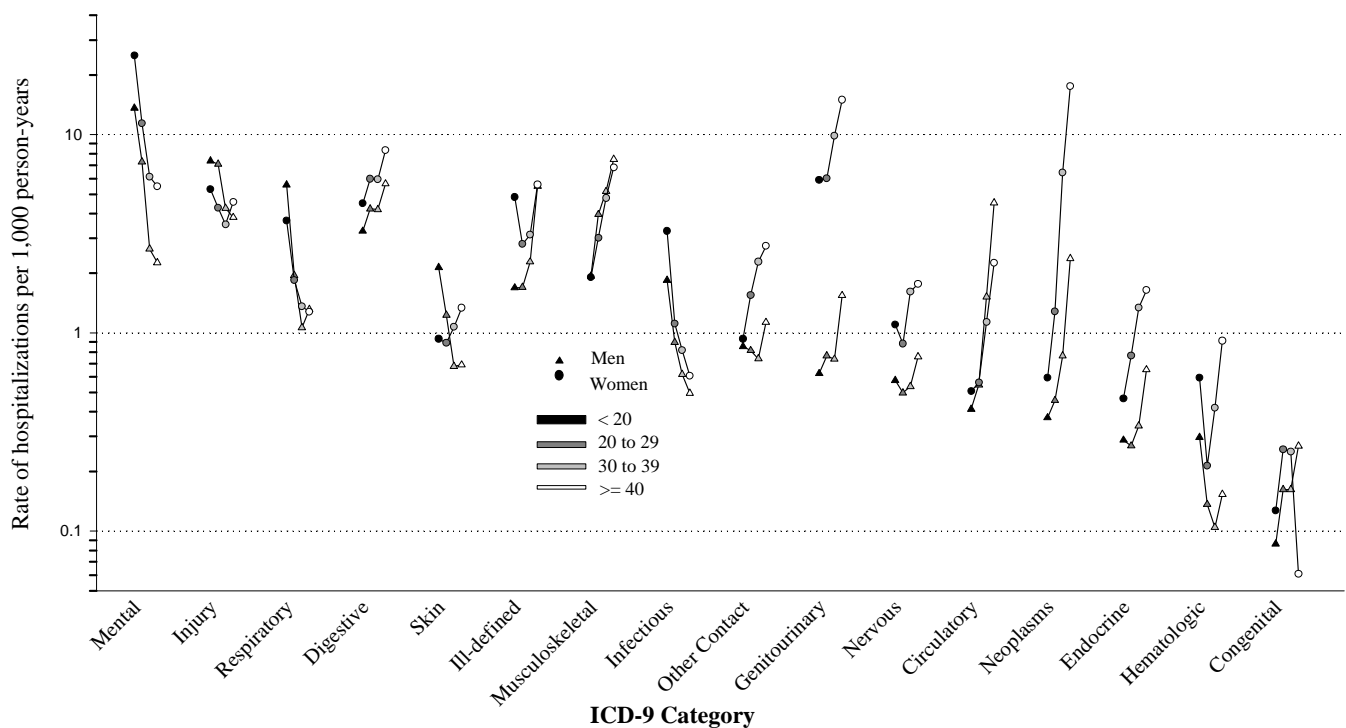
**Table 1. Hospitalizations, by ICD-9 diagnostic categories, US Armed Forces, 1993, 1997, and 2001**

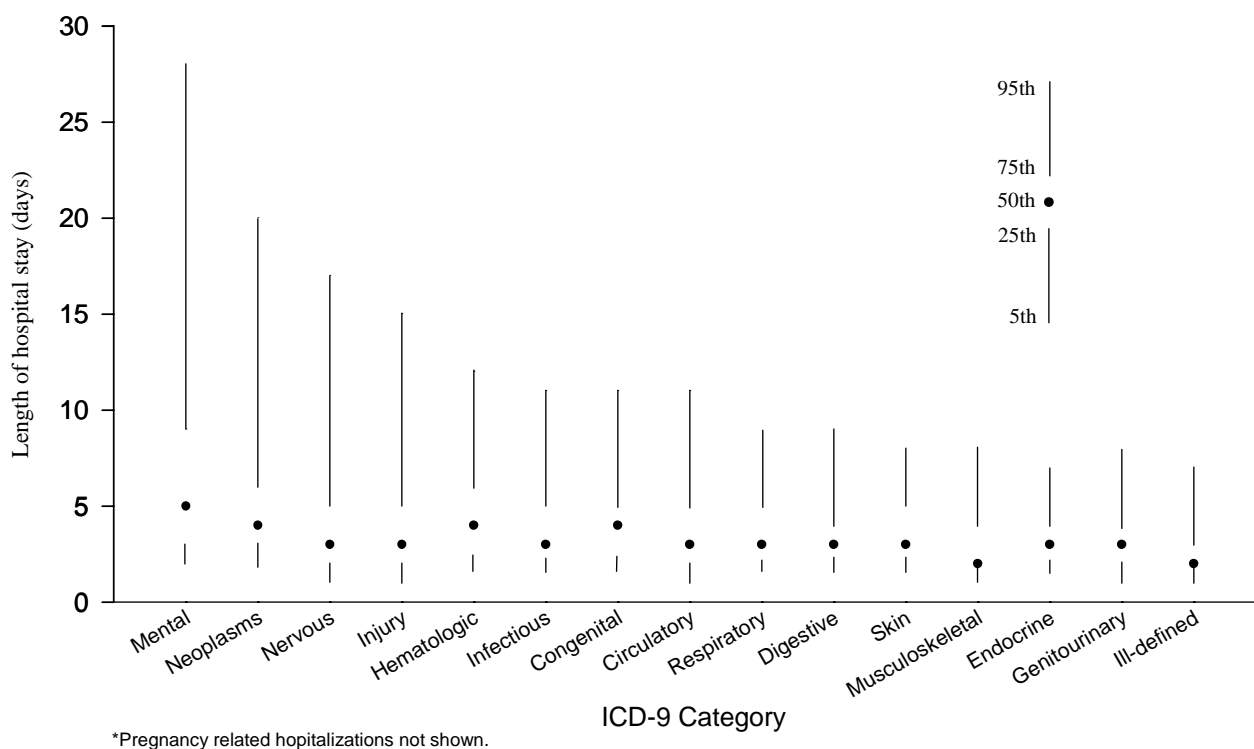
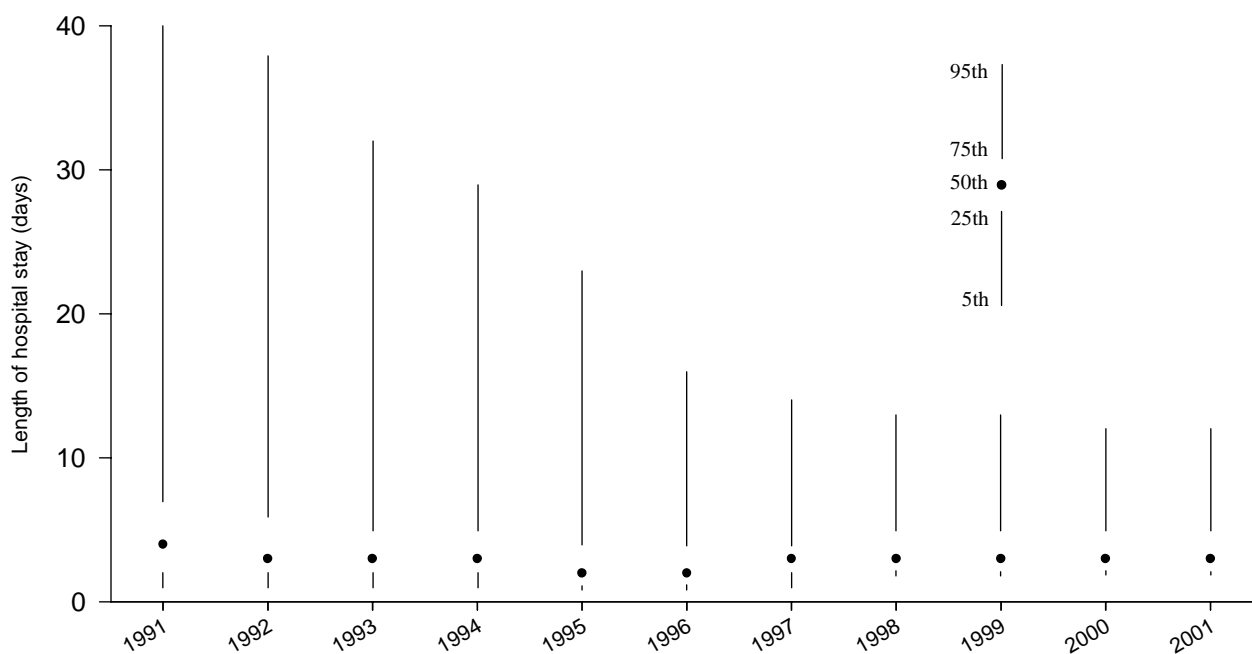
Category	1993		1997		2001	
	Number	(Rank)	Number	(Rank)	Number	(Rank)
Pregnancy-related	20,748	(3)	16,053	(1)	14,315	(1)
Mental disorders	17,824	(5)	11,651	(3)	9,095	(2)
Injury and poisoning	18,354	(4)	9,777	(4)	7,636	(3)
Digestive	27,878	(2)	9,730	(5)	6,044	(4)
Musculoskeletal	29,168	(1)	12,182	(2)	5,796	(5)
Symptoms, signs, and ill-defined conditions	6,954	(10)	4,133	(8)	3,200	(6)
Respiratory	13,496	(6)	4,663	(6)	2,606	(7)
Genitourinary	10,939	(7)	4,569	(7)	2,457	(8)
Neoplasms	5,012	(13)	2,584	(11)	1,564	(9)
Circulatory	5,393	(12)	2,712	(9)	1,523	(10)
Skin and subcutaneous tissue	4,242	(14)	1,894	(14)	1,446	(11)
Other contact with health services	9,634	(8)	2,618	(10)	1,283	(12)
Infectious and parasitic	7,358	(9)	1,973	(12)	1,239	(13)
Nervous system and sense organs	5,905	(11)	1,939	(13)	846	(14)
Endocrine, nutritional, metabolic and immunity	1,606	(15)	934	(15)	562	(15)
Blood and blood-forming organs	567	(17)	306	(17)	235	(16)
Congenital anomalies	1,283	(16)	572	(16)	233	(17)

**Figure 1. Rate of hospitalizations, US Armed Forces, 1991-2001.**



**Figure 2. Rate of hospitalizations, by major category, gender, and age, US Armed Forces, 2001.**



**Figure 3. Length of hospital stay, by major diagnostic category, US Armed Forces, 2001.\*****Figure 4. Length of hospital stay, by year, US Armed Forces, 1991-2001.**

**Table 2. Most frequent diagnoses during hospitalizations, by major diagnostic category, males, US Armed Forces, 2001**

Diagnostic category	No.	%	Diagnostic category	No.	%
<b>Infectious and parasitic diseases (001-139)</b>	989		<b>Digestive system (520 - 579)</b>	4,852	
Meningitis due to enterovirus	216	22	Acute appendicitis	1,104	23
Viral and chlamydial infection	162	16	Dentofacial anomalies, including malocclusion	526	11
Intestinal infections due to other organisms	106	11	Diseases of esophagus	504	10
Infectious mononucleosis	79	8	Inguinal hernia	298	6
Chickenpox	54	5	Other noninfectious gastroenteritis and colitis	276	6
<b>Neoplasms (140 - 239)</b>	818		<b>Genitourinary system (580 - 629)</b>	929	
Malignant neoplasm of testis	75	9	Calculus of kidney and ureter	290	31
Malignant neoplasm of prostate	58	7	Other disorders of male genital organs	128	14
Malignant neoplasm of thyroid gland	48	6	Urethral stricture	92	10
Benign neoplasm of bone and articular cartilage	38	5	Acute renal failure	70	8
Myeloid leukemia	35	4	Orchitis and epididymitis	49	5
<b>Endocrine, nutrition, immunity (240 - 279)</b>	373		<b>Pregnancy complications (630 - 679)</b>		
Diabetes mellitus	137	37	-	-	-
Disorders of fluid, electrolyte	116	31	-	-	-
Thyrotoxicosis with or without goiter	23	6	-	-	-
Nontoxic nodular goiter	15	4	-	-	-
Other disorders of pancreatic secretion	11	3	-	-	-
<b>Hematologic disorders (280 - 289)</b>	163		<b>Skin diseases (680 - 709)</b>	1,251	
Diseases of white blood cells	54	33	Other cellulitis and abscess	914	73
Other diseases of blood and blood-forming organs	40	25	Pilonidal cyst	123	10
Purpura and other hemorrhagic conditions	34	21	Cellulitis and abscess of finger and toe	69	6
Hereditary hemolytic anemias	9	6	Diseases of sebaceous glands	21	2
Aplastic anemia	9	6	Other disorders of skin and subcutaneous tissue	21	2
<b>Mental disorders (290 - 319)</b>	6,845		<b>Musculoskeletal system (710 - 739)</b>	5,089	
Adjustment reaction	2,665	39	Intervertebral disc disorders	1,027	20
Affective psychoses	1,160	17	Internal derangement of knee	1,025	20
Alcohol dependence syndrome	633	9	Other derangement of joint	677	13
Personality disorders	536	8	Other disorders of bone and cartilage	352	7
Depressive disorder, not elsewhere classified	368	5	Peripheral enthesopathies and allied syndromes	317	6
<b>Nervous system (320 - 389)</b>	616		<b>Congenital anomalies (740 - 759)</b>	188	
Migraine	73	12	Other congenital musculoskeletal anomalies	45	24
Epilepsy	43	7	Congenital anomalies of urinary system	20	11
Mononeuritis of upper limb and multiplex	38	6	Other congenital anomalies of limbs	18	10
Inflammatory and toxic neuropathy	32	5	Bulbus cordis and cardiac septal closure	17	9
Other conditions of brain	27	4	Other congenital anomalies of circulatory system	16	9
<b>Circulatory system (390 - 459)</b>	1,361		<b>Ill-defined conditions (780 - 799)</b>	2,531	
Cardiac dysrhythmias	295	22	Symptoms involving respiratory system and chest	927	37
Other forms of chronic ischemic heart disease	170	12	General symptoms	740	29
Acute myocardial infarction	122	9	Other symptoms involving abdomen and pelvis	463	18
Hemorrhoids	82	6	Symptoms involving head and neck	110	4
Other venous embolism and thrombosis	81	6	Symptoms involving digestive system	70	3
<b>Respiratory system (460 - 519)</b>	2,227		<b>Injury and poisoning (800 - 999)</b>	6,798	
Pneumonia, organism unspecified	640	29	Fracture of ankle	585	9
Peritonsillar abscess	203	9	Other complications of procedures	513	8
Pneumothorax	167	7	Fracture of face bones	381	6
Asthma	151	7	Injury, other and unspecified	278	4
Acute pharyngitis	150	7	Effects of heat and light	277	4

**Table 3. Most frequent diagnoses during hospitalizations, by major diagnostic category, females, US Armed Forces, 2001**

Diagnostic category	No.	%	Diagnostic category	No.	%
<b>Infectious and parasitic diseases (001-139)</b>	251		<b>Digestive system (520 - 579)</b>	1,198	
Meningitis due to enterovirus	58	23	Dentofacial anomalies, including malocclusion	248	21
Viral and chlamydial infection	46	18	Acute appendicitis	156	13
Intestinal infections due to other organisms	43	17	Cholelithiasis	127	11
Streptococcal sore throat and scarlet fever	16	6	Unspecified noninfectious gastroenteritis, colitis	79	7
Infectious mononucleosis	13	5	Diseases of esophagus	67	6
<b>Neoplasms (140 - 239)</b>	752		<b>Genitourinary system (580 - 629)</b>	1,529	
Uterine leiomyoma	369	49	Noninflammatory disorders	214	14
Malignant neoplasm of thyroid gland	48	6	Pain and other symptoms	180	12
Benign neoplasm of ovary	48	6	Inflammatory disease	169	11
Malignant neoplasm of female breast	45	6	Infections of kidney	164	11
Other benign neoplasm of uterus	22	3	Other disorders of breast	141	9
<b>Endocrine, nutrition, immunity (240 - 279)</b>	188		<b>Pregnancy complications (630 - 679)</b>	14,307	
Disorders of fluid, electrolyte, acid-base balance	47	25	Trauma to perineum and vulva during delivery	3,316	23
Thyrotoxicosis with or without goiter	31	16	Other indications for care, not elsewhere classified	1,259	9
Nontoxic nodular goiter	28	15	Abnormality of forces of labor	1,027	7
Obesity and other hyperalimentation	23	12	Normal delivery	984	7
Diabetes mellitus	12	6	Early or threatened labor	861	6
<b>Hematologic disorders (280 - 289)</b>	73		<b>Skin diseases (680 - 709)</b>	195	
Iron deficiency anemias	20	27	Other cellulitis and abscess	78	40
Other and unspecified anemias	15	21	Other hypertrophic and atrophic conditions of skin	48	25
Diseases of white blood cells	11	15	Pilonidal cyst	23	12
Purpura and other hemorrhagic conditions	9	12	Other disorders of skin and subcutaneous tissue	10	5
Other diseases of blood and blood-forming organs	7	10	Cellulitis and abscess of finger and toe	5	3
<b>Mental disorders (290 - 319)</b>	2,255		<b>Musculoskeletal system (710 - 739)</b>	723	
Adjustment reaction	925	41	Intervertebral disc disorders	118	16
Affective psychoses	486	22	Internal derangement of knee	117	16
Personality disorders	167	7	Other derangement of joint	81	11
Depressive disorder, not elsewhere classified	167	7	Other disorders of bone and cartilage	68	9
Neurotic disorders	156	7	Other and unspecified disorders of joint	41	6
<b>Nervous system (320 - 389)</b>	231		<b>Congenital anomalies (740 - 759)</b>	45	
Migraine	75	32	Other congenital musculoskeletal anomalies	7	16
Other and unspecified disorders	19	8	Congenital anomalies of urinary system	6	13
Multiple sclerosis	13	6	Congenital anomalies of ear, face, and neck	5	11
Other disorders of eyelids	13	6	Congenital anomalies of genital organs	5	11
Other conditions of brain	10	4	Certain congenital musculoskeletal deformities	4	9
<b>Circulatory system (390 - 459)</b>	166		<b>Ill-defined conditions (780 - 799)</b>	670	
Cardiac dysrhythmias	23	14	Other symptoms involving abdomen and pelvis	271	40
Other venous embolism and thrombosis	22	13	General symptoms	152	23
Hemorrhoids	21	13	Symptoms involving respiratory and chest	120	18
Other forms of chronic ischemic heart disease	11	7	Symptoms involving head and neck	38	6
Other diseases of pericardium	8	5	Symptoms involving digestive system	32	5
<b>Respiratory system (460 - 519)</b>	380		<b>Injury and poisoning (800 - 999)</b>	848	
Pneumonia, organism unspecified	68	18	Other complications of procedures, NEC	119	14
Asthma	56	15	By analgesics, antipyretics, antirheumatics	76	9
Acute pharyngitis	34	9	Complications peculiar to certain specified procedures	50	6
Peritonsillar abscess	32	8	Fracture of ankle	38	4
Chronic disease of tonsils and adenoids	31	8	Complications affecting specified body systems	35	4



**Table 4. Injury hospitalizations by causal agent,\* US Armed Forces, 2001**

Cause	Number	Percent
<b>Unintentional</b>		
Falls and miscellaneous	1714	22.4
Land transport	1431	18.7
Complications of medical care	1100	14.4
Athletics	984	12.9
Machinery, tools	424	5.5
Poisons and fire	395	5.2
Environmental factors	374	4.9
Air transport	288	3.8
Guns, explosives, except in war	124	1.6
Water transport	46	0.6
Unknown	77	1.0
<b>Intentional</b>		
Violence	350	4.6
Self-inflicted	297	3.9
War	42	0.5

\* Causal agents were determined by STANAG "external cause of injury" codes.

## Ambulatory Visits among Active Duty Members, US Armed Forces, 2001

This report summarizes the frequencies and trends of ambulatory visits by active duty US military personnel during 2001 at fixed military medical treatment facilities. All data were derived from the Defense Medical Surveillance System (DMSS). Diagnoses were summarized based on the first three digits of primary diagnosis codes (International Classification of Diseases, 9<sup>th</sup> Revision, Clinical Modifications).

*Frequencies, rates, and trends.* During 2001, there were 11,007,734 ambulatory visits by active duty servicemembers (table 1). There were approximately 9% more ambulatory visits in 2001 than in 2000 (figure 1); and the outpatient visit rate (all causes) in 2001 (8.1 per person-year) was approximately 5% higher than in 2000.

*Distribution of visits, by diagnosis categories.* The general distribution of ambulatory visits by major diagnostic categories was similar in 2001 to 2000. As in previous years, more than 40% of all ambulatory visits were for “other contact with health services” (e.g., periodic physical examinations, immunizations, health consultations). Of all other major diagnostic categories, “musculoskeletal disorders,” “injuries and poisonings,” and “respiratory disorders” accounted for the most ambulatory visits among service members; and in these major categories, respectively, the most frequent diagnoses were “other and unspecified disorders of the joint,” “sprains and strains of the foot and ankle,” and “acute upper respiratory infections” (tables 2,3). Of note, the numbers of ambulatory visits attributed to “mental disorders” and “disorders of nervous system and sensory organs” increased by 54% and 26%, respectively, since 1998 (table 1).

*Rates, by gender and age.* The outpatient visit rate (all causes) was more than twice as high among women (14.8 per person-year) as men (7.0 per person-year) (figure 2). In all major diagnostic categories, except digestive disorders, women had higher rates than men. For most major diagnostic categories, ambulatory visit rates were constant or increased with age; in addition, age trends among men and women were similar in most diagnostic categories. However, ambulatory visit rates for genitourinary disorders were relatively constant with age among women, but they increased with age among men. Also, ambulatory visit rates for “infection and parasitic disorders” and “injuries and poisonings” decreased with age among both men and women.

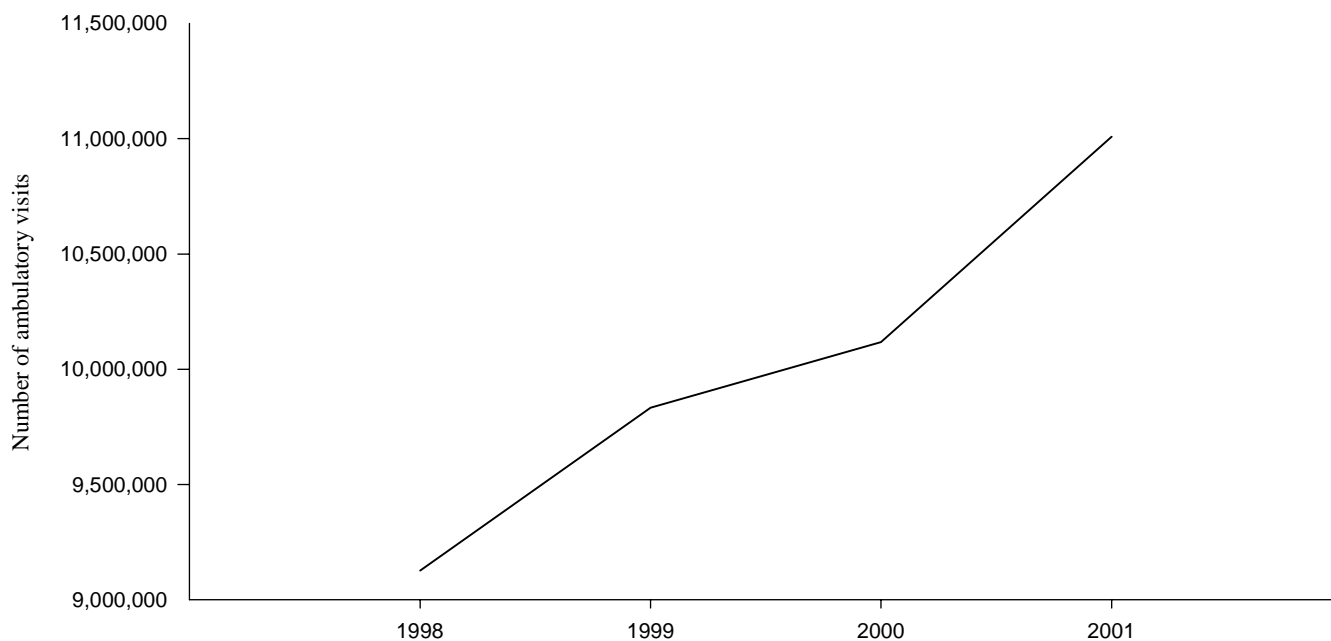
*Duty restrictions, by diagnosis categories.* Patient dispositions after ambulatory visits provide insights into the relative severities and operational impacts of various conditions. After more than 80% of all ambulatory visits, servicemembers returned to duty without limitations; after approximately 10% of all visits, servicemembers were restricted to light or limited duties; and after approximately 1.7% of all visits, servicemembers were sent to their quarters for convalescence. Only 0.3% of all ambulatory visits resulted in hospitalizations. Visits for “musculoskeletal disorders,” “respiratory disorders,” and “injuries and poisonings” were the most likely to result in light or limited duty restrictions (figure 3). Visits for “injuries and poisonings” were the most likely to result in dispositions to quarters for convalescence.

*Analysis and report by Samuel C. Washington, MPH, Analysis Group, Army Medical Surveillance Activity.*

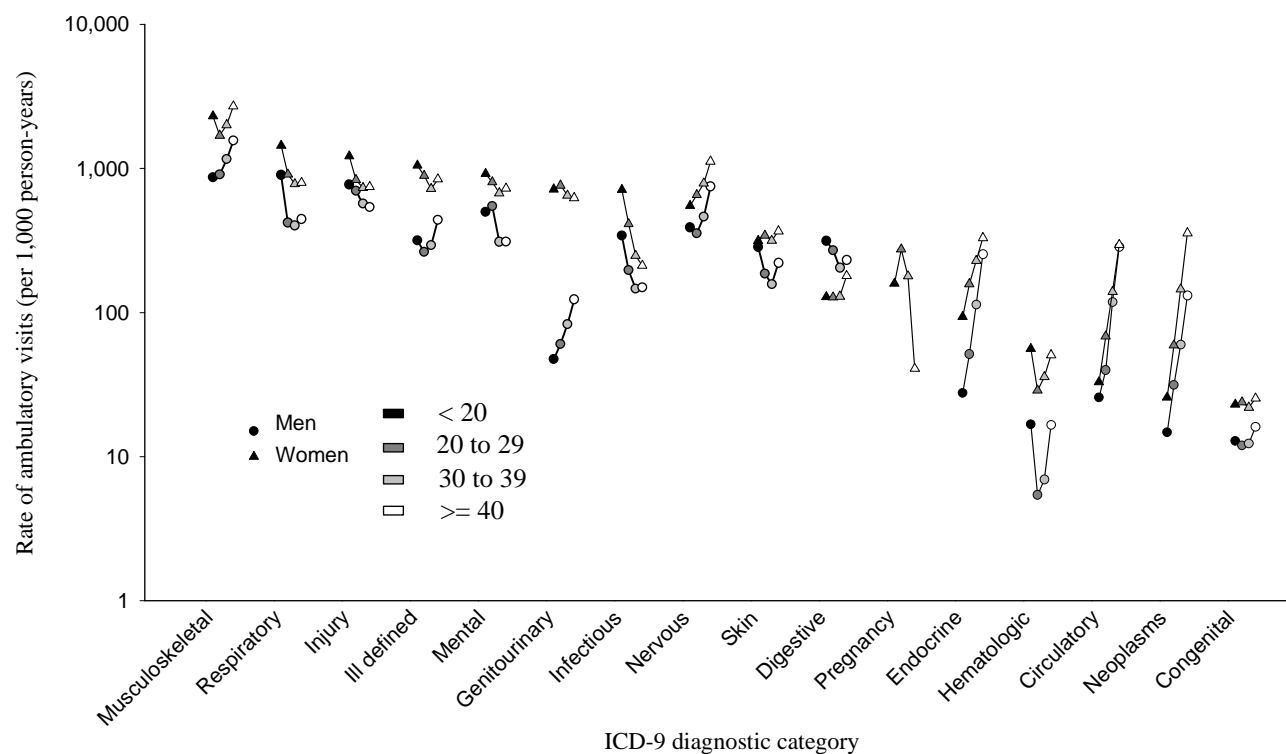
**Table 1. Ambulatory visits, by major diagnostic category, active duty,  
US Armed Forces, 1998-2001**

Major diagnostic category (ICD-9-CM)	1998		1999		2000		2001	
	No.	Rank	No.	Rank	No.	Rank	No.	Rank
Other contact with health services	3,672,891	( 1)	4,016,771	( 1)	4,106,349	( 1)	4,532,127	( 1)
Musculoskeletal	1,350,686	( 2)	1,436,855	( 2)	1,504,764	( 2)	1,588,104	( 2)
Injury and poisoning	809,008	( 3)	831,868	( 3)	852,988	( 3)	919,631	( 3)
Respiratory	578,571	( 4)	657,720	( 4)	634,458	( 4)	717,178	( 4)
Mental disorders	436,545	( 6)	518,161	( 6)	580,302	( 5)	671,085	( 5)
Nervous system and sense organs	506,479	( 5)	540,875	( 5)	570,064	( 6)	637,393	( 6)
Symptoms, signs, and ill-defined conditions	418,086	( 7)	474,437	( 7)	486,396	( 7)	512,877	( 7)
Infectious and parasitic	288,489	( 8)	303,117	( 8)	291,688	( 8)	296,981	( 8)
Skin and subcutaneous tissues	255,790	( 9)	269,795	( 9)	268,398	( 9)	285,631	( 9)
Genitourinary	214,580	(10)	216,268	(10)	219,795	(10)	227,157	(10)
Digestive	204,786	(11)	212,296	(11)	203,238	(11)	205,120	(11)
Endocrine, nutritional, metabolic, and immunity	116,544	(12)	123,119	(12)	134,916	(12)	137,875	(12)
Circulatory	114,264	(13)	119,710	(13)	120,362	(13)	119,740	(13)
Neoplasms	74,413	(14)	76,938	(14)	76,522	(14)	75,808	(14)
Pregnancy	33,981	(15)	38,901	(15)	38,754	(15)	45,621	(15)
Congenital anomalies	15,193	(16)	15,727	(16)	16,042	(16)	19,097	(16)
Blood and blood-forming organs	11,701	(17)	11,719	(17)	13,204	(17)	16,309	(17)

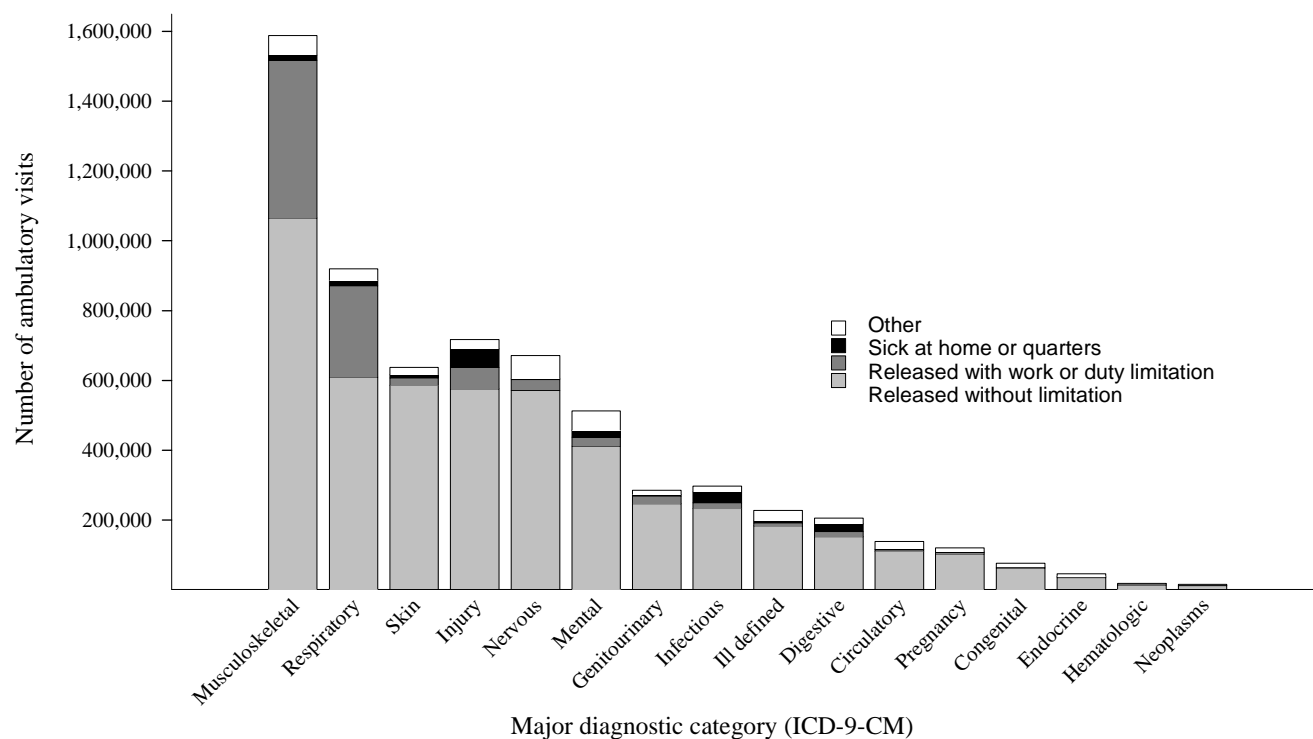
**Figure 1. Number of ambulatory visits, by calendar year,  
US Armed Forces, 1998-2001.**



**Figure 2. Rates of ambulatory visits, by major diagnostic category, gender, and age, US Armed Forces, 2001.**



**Figure 3. Dispositions after ambulatory visits, by major diagnostic categories, active duty, US Armed Forces, 2001.**



Note: Other includes admitted, immediate referral, left without being seen, left against medical advice, and expired.

**Table 2. Most frequent diagnoses during ambulatory visits, by major diagnostic categories, males, US Armed Forces, 2001**

Diagnostic category	No.	%	Diagnostic category	No.	%
<b>Infectious and parasitic disease (001-139)</b>	218,511		<b>Digestive system (520-579)</b>	153,808	
Viral and chlamydial infections classified elsewhere	70,377	32	Other noninfectious gastroenteritis and colitis	45,004	29
Other diseases due to viruses and Chlamydiae	43,679	20	Diseases of esophagus	27,011	18
Dermatophytosis	24,785	11	Inguinal hernia	13,371	9
Other venereal diseases	9,897	5	Gastritis and duodenitis	9,186	6
Ill-defined intestinal infections	8,882	4	Functional digestive disorders, not classified	6,616	4
<b>Neoplasms (140-239)</b>	55,740		<b>Genitourinary system (580-629)</b>	83,212	
Benign neoplasm of skin	13,826	25	Other disorders of urethra and urinary tract	14,176	17
Lipoma	7,967	14	Other disorders of male genital organs	11,077	13
Other neoplasm of unspecified behavior and site	3,487	6	Calculus of kidney and ureter	10,507	13
Other malignant neoplasm of skin	2,593	5	Orchitis and epididymitis	9,669	12
Malignant neoplasm of testis	2,484	4	Infertility, male	5,945	7
<b>Endocrine, nutritional, metabolic, immunity (240-279)</b>	101,609		<b>Pregnancy complications (630-679)</b>		
Disorders of lipid metabolism	34,025	33			
Obesity and other hyperalimentation	25,647	25			
Diabetes mellitus	16,192	16			
Gout	5,810	6			
Disorders of fluid, electrolyte, and acid-base balance	5,716	6			
<b>Hematological disorders (280-289)</b>	9,212		<b>Skin diseases (680-709)</b>	218,556	
Hereditary hemolytic anemias	2,110	23	Contact dermatitis and other eczema	38,281	18
Other and unspecified anemias	1,823	20	Diseases of sebaceous glands	32,185	15
Other diseases of blood and blood-forming organs	1,306	14	Other cellulitis and abscess	25,078	11
Coagulation defects	1,112	12	Diseases of hair and hair follicles	22,857	10
Iron deficiency anemias	911	10	Other disorders of skin/subcutaneous tissue	18,643	9
<b>Mental disorders (290-319)</b>	515,047		<b>Musculoskeletal system (710-739)</b>	1,202,782	
Alcohol dependence syndrome	157,121	31	Other and unspecified disorders of joint	278,412	23
Nondependent abuse of drugs	110,745	22	Other and unspecified disorders of back	249,917	21
Adjustment reactions	71,037	14	Peripheral enthesopathies/allied syndromes	144,570	12
Neurotic disorders	39,216	8	Other disorders of soft tissues	104,317	9
Affective psychoses	36,462	7	Internal derangement of knee	95,902	8
<b>Nervous system (320-389)</b>	494,514		<b>Congenital anomalies (740-759)</b>	14,416	
Disorders of refraction and accommodation	246,025	50	Certain congenital musculoskeletal deformities	4,583	32
Hearing loss	32,565	7	Other congenital musculoskeletal anomalies	2,786	19
Disorders of conjunctiva	30,673	6	Other congenital anomalies of limbs	1,514	11
Other disorders of ear	15,748	3	Other congenital anomalies of the integument	1,067	7
Disorders of external ear	14,964	3	Congenital anomalies of genital organs	856	6
<b>Circulatory system (390-459)</b>	99,792		<b>Ill-defined conditions (780-799)</b>	339,743	
Essential hypertension	52,270	52	Symptoms involving chest/respiratory system	64,447	19
Hemorrhoids	11,356	11	General symptoms	51,419	15
Diseases of capillaries	6,664	7	Symptoms involving head and neck	42,411	12
Cardiac dysrhythmias	5,085	5	Other symptoms involving abdomen/pelvis	41,434	12
Other forms of chronic ischemic heart disease	3,798	4	Symptoms involving skin/integumentary tissue	32,205	9
<b>Respiratory system (460-519)</b>	530,306		<b>Injury and poisoning (800-999)</b>	750,069	
Acute upper respiratory infections of multiple sites	211,779	40	Sprains and strains of ankle and foot	95,345	13
Allergic rhinitis	67,092	13	Sprains and strains of knee and leg	87,675	12
Acute pharyngitis	59,757	11	Other and ill-defined sprains and strains	54,730	7
Acute sinusitis	39,696	7	Sprains/strains of unspecified parts of back	54,538	7
Acute bronchitis and bronchiolitis	26,043	5	Sprains and strains of shoulder and upper arm	37,330	5

**Table 3. Most frequent diagnoses during ambulatory visits, by major diagnostic categories, females, US Armed Forces, 2001**

Diagnostic category	No.	%	Diagnostic category	No.	%
<b>Infectious and parasitic disease (001-139)</b>	78,740		<b>Digestive system (520-579)</b>	51,312	
Viral and chlamydial infections, classified elsewhere	27,804	35	Other noninfectious gastroenteritis and colitis	19,317	38
Other diseases due to viruses and Chlamydiae	10,570	13	Diseases of esophagus	6,016	12
Candidiasis	8,093	10	Functional digestive disorders, NEC	5,835	11
Dermatophytosis	4,452	6	Gastritis and duodenitis	4,047	8
Other venereal diseases	4,223	5	Disorders of function of stomach	1,787	3
<b>Neoplasms (140-239)</b>	20,068		<b>Genitourinary system (580-629)</b>	143,945	
Benign neoplasms of skin	4,231	21	Other disorders of urethra and urinary tract	27,411	19
Malignant neoplasms of female breast	3,395	17	Inflammatory disease of cervix, vagina, vulva	22,048	15
Uterine leiomyoma	2,137	11	Disorders of menstruation	17,192	12
Lipoma	1,139	6	Other symptoms associated with genitalia	17,141	12
Other neoplasms of unspecified behavior and site	957	5	Noninflammatory disorders of cervix	13,801	10
<b>Endocrine, nutrition, metabolic, immunity (240-279)</b>	36,266		<b>Pregnancy (630-679)</b>	43,864	
Obesity and other hyperalimentation	13,796	38	Early or threatened labor	8,065	18
Acquired hypothyroidism	5,319	15	Hemorrhage in early pregnancy	5,659	13
Disorders of lipid metabolism	3,465	10	Other conditions complicating pregnancy	3,509	8
Disorders of fluid, electrolyte, and acid-base balance	3,106	9	Other complications, not elsewhere classified	3,326	8
Diabetes mellitus	2,071	6	Spontaneous abortion	2,660	6
<b>Hematological disorders (280-289)</b>	7,097		<b>Skin diseases (680-709)</b>	67,075	
Iron deficiency anemias	2,574	36	Diseases of sebaceous glands	14,100	21
Other and unspecified anemias	2,253	32	Contact dermatitis and other eczema	12,268	18
Other deficiency anemias	520	7	Other disorders of skin/subcutaneous tissue	7,076	11
Other diseases of blood and blood-forming organs	452	6	Other cellulitis and abscess	4,739	7
Hereditary hemolytic anemias	427	6	Urticaria	3,797	6
<b>Mental disorders (290-319)</b>	156,038		<b>Musculoskeletal system (710-739)</b>	385,322	
Adjustment reactions	38,386	25	Other and unspecified disorders of joint	85,262	22
Affective psychoses	25,196	16	Other and unspecified disorders of back	79,494	21
Neurotic disorders	19,285	12	Other disorders of soft tissues	41,993	11
Depressive disorders, not elsewhere classified	17,365	11	Peripheral enthesopathies and allied syndromes	40,528	11
Alcohol dependence syndrome	17,318	11	Internal derangement of knee	23,760	6
<b>Nervous system (320-389)</b>	142,879		<b>Congenital anomalies (740-759)</b>	4,681	
Disorders of refraction and accommodation	61,691	43	Certain congenital musculoskeletal deformities	1,498	32
Migraine	16,772	12	Other congenital anomalies of the integument	688	15
Disorders of conjunctiva	9,992	7	Other congenital anomalies of limbs	574	12
Mononeuritis of upper limb and mononeuritis multiplex	7,032	5	Other congenital musculoskeletal anomalies	485	10
Suppurative and unspecified otitis media	4,606	3	Congenital anomalies of urinary system	228	5
<b>Circulatory system (390-459)</b>	19,948		<b>Ill-defined conditions (780-799)</b>	173,134	
Essential hypertension	7,639	38	Other symptoms involving abdomen/pelvis	37,203	21
Diseases of capillaries	2,635	13	Symptoms involving head and neck	24,126	14
Hemorrhoids	2,532	13	Nonspecific histological/immunological findings	23,436	14
Varicose veins of lower extremities	1,451	7	Symptoms involving chest/respiratory system	18,860	11
Cardiac dysrhythmias	1,166	6	General symptoms	18,093	10
<b>Respiratory system (460-519)</b>	186,872		<b>Injury and poisoning (800-999)</b>	169,562	
Acute upper respiratory infections of multiple sites	69,364	37	Sprains and strains of ankle and foot	22,110	13
Allergic rhinitis	26,325	14	Sprains and strains of knee and leg	20,159	12
Acute pharyngitis	22,358	12	Sprains/strains of unspecified parts of back	17,204	10
Acute sinusitis	17,900	10	Other and ill-defined sprains and strains	13,767	8
Asthma	11,695	6	Certain adverse effects, not elsewhere classified	9,214	5

## Reportable Medical Events, US Armed Forces, 2001

In the US Armed Forces, data regarding medical events of special surveillance interest are collected and reported using service-specific electronic reporting programs. The Army uses the Reportable Medical Events System (RMES), the Air Force uses the Air Force Reportable Event Surveillance System (AFRESS), and the Navy uses the Navy Reportable Disease System (NDRS). Currently, 34 Army, 80 Air Force, and 27 fixed (e.g., not including ships) Navy preventive medicine/public health activities throughout the world electronically transmit reportable medical events data to their respective service surveillance centers. From these centers, the data are forwarded to the Army Medical Surveillance Activity (AMSA) in Washington, DC. At AMSA, the data are integrated with personnel and other medical event data in the Defense Medical Surveillance System (DMSS) to enable routine and special summaries, analyses, and reports.

Since 1998, 70 medical conditions<sup>1</sup> have been designated as “reportable” by the Department of Defense. The Army started reporting these conditions in 1994. During calendar year 2000, the medical surveillance centers of the Navy and Air Force began forwarding their reportable medical event case reports to AMSA for integration into the DMSS. The integration of data from all of the services enables summaries and analyses across the entire US Armed Forces. This report summarizes frequencies, rates, and trends (through calendar year 2001) of reportable medical events among active duty military personnel.

During calendar year 2001, there were a total of 15,554 notifiable medical event reports—more than in any previous year—from U.S. military medical treatment facilities (MTFs). During the year, there were an average of 27, 9, and 6 case reports per day from Army, Air Force, and Navy MTFs, respectively (tables 2, 3, 4). Reports of notifiable conditions from Army MTFs have increased each year since automated reporting began; however, in 2001 compared to 2000, there were approximately 14% fewer reports from Air Force MTFs and 4% fewer from Navy MTFs.

*Sexually-transmitted infections.* In 2001, as in previous years, genital infections (due to chlamydia, gonorrhea, syphilis, and non-gonococcal urethritis) accounted for more than 90% of all notifiable case reports. Genital infections caused by *Chlamydia trachomatis* remained the most frequently reported notifiable condition.

*Environmental.* In 2001, U.S. military MTFs reported 514 heat and cold-related injuries. During the year, compared to 2000, there were approximately 13% more heat injury, but nearly the same number of cold injury, reports. In Army MTFs, compared to the average of the prior 3 years, there were approximately 40% more heat injury, but approximately 9% fewer cold injury, reports (figure 1).

*Vaccine preventable illnesses.* In 2001, among active duty servicemembers, there were few or no reports of mumps, measles, rubella, diphtheria, rabies, or tetanus (tables 2,3,4). Overall, there were 252 reports of varicella, influenza, and hepatitis B combined among active duty servicemembers—approximately 25% fewer than in 2000. In Army MTFs, compared to the average of the prior 3 years, there were approximately 47% fewer reports of varicella, influenza, and hepatitis B combined (table 2, figure 1). Undoubtedly, the trends reflect the continuing impacts of vaccination programs against these viruses.<sup>2</sup>

*Arthropod-transmitted diseases.* In 2001, there were few or no reports of dengue, typhus, yellow fever, Rift Valley fever, or other hemorrhagic fevers among active duty servicemembers. During the year, there were 50 reports of malaria, 25 reports of Lyme disease, and 2 reports of Rocky Mountain spotted fever among active duty servicemembers—30%, 32%, and 88% fewer than in 2000, respectively (tables 2, 3, 4). In the past year, there was a 50% decrease in reports of malaria attributable to *Plasmodium vivax*<sup>3</sup>; however, there was an increase in reports of *P. falciparum* cases.<sup>4</sup>

*Food/water-transmitted infections.* There was no clear trend in reports of food and water-transmitted illnesses overall among active duty servicemembers. For example, in 2001 compared to 2000, there were more reports of salmonellosis and shigellosis, fewer reports of campylobacter, and an identical number of reports of giardiasis. As in previous years, there were few or no reports of cholera, amebiasis, or typhoid fever (tables 2, 3, 4). Finally, from 2000 to 2001, there was a notable decrease in reports of *E. coli* O157:H7 among servicemembers.

*Data analysis and report by Abigail L. Wilson, MPH, Analysis Group, Army Medical Surveillance Activity.*

#### References

1. Tri-Service consensus list of reportable medical events: Completeness and timeliness of reporting in the Army, January-June 1998. *MSMR*, 1998;4(8):2-11. [www.amsa.army.mil](http://www.amsa.army.mil)
2. Niebuhr, DW. Varicella primary prevention program, Fort Knox, Kentucky. *MSMR*, 1999;5(4): 9-10.
3. P. vivax malaria acquired by US soldiers in Korea: acquisition trends and incubation period characteristics, 1994-2000. *MSMR*, 2001;6(1):7-9.
4. Malaria among active duty soldiers, US Army, 2001. *MSMR*, 2002;7(2):2-4.
5. CDC. Preliminary FoodNet data on the incidence of foodborne illnesses – selected sites, United States, 2001. *MMWR*, 2002;51(15): 325-9.



**Table I. Sentinel reportable events, US Army medical treatment facilities, cumulative events for all beneficiaries,<sup>1</sup> calendar years 2000 and 2001<sup>2,3</sup>**

Reporting Location	Number of reports for all events <sup>2</sup>		Food-borne								Vaccine Preventable					
			Campylo-bacter		Giardia		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
<b>NORTH ATLANTIC</b>																
Walter Reed AMC, DC	209	199	6	2	6	8	10	8	5	3	3	-	1	-	6	2
Aberdeen, MD	45	65	-	-	-	-	-	-	-	-	-	-	3	1	1	-
FT Belvoir, VA	248	206	15	11	5	11	9	10	2	-	-	1	5	-	1	-
FT Bragg, NC	1,489	1,740	2	6	-	-	18	36	1	1	-	-	-	6	6	3
FT Drum, NY	227	199	1	2	-	3	-	2	-	-	-	-	-	-	6	-
FT Eustis, VA	259	276	4	1	-	-	5	2	-	-	-	-	1	-	2	1
FT Knox, KY	252	278	1	1	2	5	1	2	-	-	-	-	1	-	7	1
FT Lee, VA	254	227	-	-	-	-	-	-	-	-	1	-	-	-	-	-
FT Meade, MD	100	70	-	-	-	-	2	1	-	-	-	-	-	-	-	-
West Point, NY	104	87	-	1	-	-	4	1	-	-	-	3	1	-	2	-
<b>GREAT PLAINS</b>																
Brooke AMC, TX	328	399	-	-	3	2	8	4	7	1	3	-	-	-	2	-
Beaumont AMC, TX	304	283	4	3	5	7	4	1	7	6	-	-	-	2	2	1
FT Carson, CO	667	722	2	3	5	8	2	5	9	2	-	-	1	2	-	-
FT Hood, TX	2,159	2,284	6	4	1	2	15	16	6	16	1	-	2	10	2	2
FT Huachuca, AZ	62	46	-	1	-	-	1	1	-	1	-	-	-	-	-	1
FT Leavenworth, KS	33	43	1	1	2	-	1	2	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	192	233	1	1	2	-	-	-	-	-	-	1	-	-	13	6
FT Polk, LA	265	270	-	-	-	-	-	3	-	-	-	-	-	-	-	-
FT Riley, KS	236	267	-	-	-	1	-	2	-	-	-	-	-	1	-	-
FT Sill, OK	312	443	-	-	-	-	-	1	-	7	-	-	-	1	4	2
<b>SOUTHEAST</b>																
Eisenhower AMC, GA	273	272	-	-	-	-	2	2	1	-	-	3	3	2	2	-
FT Benning, GA	385	530	3	1	3	3	17	6	1	13	-	-	1	-	8	5
FT Campbell, KY	514	911	4	6	7	6	17	7	15	1	-	1	1	-	2	-
FT Jackson, SC	419	295	-	-	-	-	-	-	-	-	-	1	-	5	3	2
FT Rucker, AL	84	91	-	-	-	-	3	4	-	-	-	-	1	-	-	-
FT Stewart, GA	551	492	-	-	-	-	8	17	-	-	-	-	2	3	-	-
<b>WESTERN</b>																
Madigan AMC, WA	732	754	5	5	6	3	7	9	2	1	1	-	3	2	-	-
FT Irwin, CA	69	86	-	-	-	-	1	-	-	-	-	2	1	3	5	2
FT Wainwright, AK	117	187	-	-	-	3	-	-	-	-	-	-	-	-	-	-
<b>OTHER LOCATIONS</b>																
Tripler, HI	826	955	47	42	10	14	12	27	2	7	1	1	2	1	1	-
Europe	1,802	1,923	18	42	3	5	37	57	2	1	1	3	9	13	9	9
Korea	570	129	-	-	-	-	8	5	-	-	-	1	1	-	3	2
<b>Total</b>	<b>14,087</b>	<b>14,962</b>	<b>120</b>	<b>133</b>	<b>60</b>	<b>81</b>	<b>192</b>	<b>231</b>	<b>60</b>	<b>60</b>	<b>11</b>	<b>17</b>	<b>39</b>	<b>52</b>	<b>87</b>	<b>39</b>

1. Includes active duty servicemembers, as well as dependents and retirees.

2. Seventy events specified by Tri-Service Reportable Events, Version 1.0, July 2000.

3. Events reported by April 30, 2001 and 2002

**Table I. (Cont'd) Sentinel reportable events, US Army medical treatment facilities, cumulative events for all beneficiaries,<sup>1</sup> calendar years 2000 and 2001<sup>2,3</sup>**

Reporting Location	Arthropod-borne				Sexually Transmitted								Environmental			
	Lyme Disease		Malaria		Chlamydia		Gonorrhea		Syphilis <sup>4</sup>		Urethritis <sup>5</sup>		Cold		Heat	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
<b>NORTH ATLANTIC</b>																
Walter Reed AMC, DC	3	3	1	1	76	89	29	24	2	10	-	-	1	-	-	-
Aberdeen Prov. Grd., MD	3	-	-	-	19	43	6	13	2	-	2	2	-	3	-	-
FT Belvoir, VA	-	-	1	-	151	130	33	30	3	2	-	-	-	-	10	3
FT Bragg, NC	2	-	9	15	609	867	284	354	3	-	379	240	6	7	164	194
FT Drum, NY	-	-	1	-	144	146	59	40	-	1	2	-	12	2	1	-
FT Eustis, VA	1	-	-	-	188	187	46	72	-	-	-	-	-	-	8	10
FT Knox, KY	-	-	-	1	181	215	45	47	1	2	-	-	1	-	10	2
FT Lee, VA	-	-	-	-	193	174	59	53	-	-	-	-	-	-	1	-
FT Meade, MD	-	-	-	-	76	53	11	14	1	1	2	1	-	-	-	-
West Point, NY	34	50	1	-	45	26	12	3	1	-	-	1	1	-	1	1
<b>GREAT PLAINS</b>																
Brooke AMC, TX	-	-	-	1	243	325	38	48	-	-	6	3	-	1	7	8
Beaumont AMC, TX	-	1	3	4	162	153	58	56	2	1	-	-	-	-	4	5
FT Carson, CO	-	-	1	-	502	545	74	66	-	1	51	85	2	-	-	-
FT Hood, TX	-	1	1	4	1,130	1,307	421	445	1	5	496	390	1	-	32	62
FT Huachuca, AZ	-	-	-	-	48	36	12	5	-	-	-	-	-	-	1	-
FT Leavenworth, KS	1	-	-	-	21	28	3	9	-	-	-	-	-	-	2	-
FT Leonard Wood, MO	1	-	-	-	96	146	36	41	-	-	8	8	19	9	11	15
FT Polk, LA	-	-	-	2	225	204	35	55	-	-	-	-	-	-	4	2
FT Riley, KS	-	-	-	1	147	183	60	46	1	-	-	-	23	5	2	27
FT Sill, OK	2	1	-	1	180	238	62	103	-	-	49	71	-	1	8	12
<b>SOUTHEAST</b>																
Eisenhower AMC, GA	2	-	3	7	221	221	27	26	1	-	-	-	-	-	1	2
FT Benning, GA	-	2	8	1	174	312	102	101	4	-	-	1	-	-	52	47
FT Campbell, KY	1	2	9	1	295	716	146	157	1	1	-	-	2	-	4	8
FT Jackson, SC	-	-	-	-	359	192	47	60	4	3	-	-	-	1	1	27
FT Rucker, AL	-	-	1	-	55	65	16	15	-	-	-	-	-	-	1	4
FT Stewart, GA	-	-	2	1	183	178	126	140	-	1	200	138	-	-	27	11
<b>WESTERN</b>																
Madigan AMC, WA	3	-	9	-	496	508	67	92	-	1	108	121	-	4	-	-
FT Irwin, CA	-	-	1	-	48	50	9	14	2	-	-	-	-	-	-	13
FT Wainwright, AK	-	-	-	-	99	130	4	5	-	-	-	-	13	44	-	-
<b>OTHER LOCATIONS</b>																
Tripler, HI	-	-	5	-	571	689	100	85	-	-	2	1	-	1	3	-
Europe	19	7	3	7	1,386	1,474	275	246	5	2	-	2	6	17	-	5
Korea	-	-	17	13	441	61	47	35	16	1	11	1	2	1	5	4
<b>Total</b>	<b>72</b>	<b>67</b>	<b>76</b>	<b>60</b>	<b>8,764</b>	<b>9,691</b>	<b>2,349</b>	<b>2,500</b>	<b>50</b>	<b>32</b>	<b>1,316</b>	<b>1,065</b>	<b>89</b>	<b>96</b>	<b>360</b>	<b>462</b>

4. Primary and secondary.

5. Urethritis, non-gonoccal (NGU).

Note: Completeness and timeliness of reporting varies by facility.

Source: Army Reportable Medical Events System.

**Table 2. Number of reportable events<sup>a</sup> among active duty personnel,  
Army medical treatment facilities, 1997-2001**

Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001	Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001
<b>All reportable events</b>	<b>6241</b>	<b>7479</b>	<b>8442</b>	<b>9530</b>	<b>9856</b>						
Amebiasis	-	2	1	1	4	Malaria, falciparum	5	-	5	4	13
Anthrax	-	-	-	-	-	Malaria, malariae	-	-	-	-	1
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	1	-	-	1
Botulism	-	-	-	-	-	Malaria, unspecified	5	7	4	5	8
Brucellosis	-	-	-	-	-	Malaria, vivax	30	34	53	47	22
Campylobacter	31	45	46	35	55	Measles	-	-	-	-	-
Carbon monoxide poisoning	5	5	2	6	5	Meningococcal meningitis	-	-	2	3	1
Chemical agent exposure	1	-	-	-	1	Meningococcal septicemia	-	-	-	-	-
Chlamydia	3525	4243	5035	5788	6240	Mumps	3	1	2	2	1
Cholera	-	1	-	-	-	Pertussis	-	-	-	2	-
Coccidioidomycosis	2	3	1	2	2	Plague	-	-	-	-	-
Cold weather	43	75	117	79	82	Pneumococcal pneumonia	-	1	17	2	4
Cryptosporidiosis	-	1	-	2	1	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	1	-
Dengue fever	4	6	3	1	1	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	3	3	9	3	Rheumatic fever, acute	-	1	-	-	-
Ehrlichiosis	2	2	1	2	3	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	-	2	Rocky Mountain spotted fever	-	2	-	13	2
Filariasis	-	-	1	1	-	Rubella	-	-	-	-	-
Giardiasis	18	29	17	16	19	Salmonellosis	49	75	37	40	59
Gonorrhea	1323	1537	1538	1711	1797	Schistosomiasis	-	-	-	1	-
H. influenzae, invasive	3	-	4	1	2	Shigellosis	24	16	24	7	9
Hantavirus infection	-	4	1	-	-	Smallpox	-	-	-	-	-
Heat exhaustion	80	179	179	240	260	Streptococcus, group A, inv.	-	1	1	-	4
Heat stroke	42	77	69	53	112	Syphilis	37	63	67	50	34
Hemorrhagic fever	2	-	1	2	1	Tetanus	-	1	-	-	-
Hepatitis A	9	10	3	3	7	Toxic shock syndrome	-	2	-	1	-
Hepatitis B	40	56	28	22	28	Trichinosis	1	-	-	-	-
Hepatitis C	14	29	14	16	23	Trypanosomiasis	-	1	-	-	-
Influenza	1	65	64	7	25	Tuberculosis, pulmonary	3	5	7	3	3
Lead poisoning	-	-	-	-	-	Tularemia	2	-	-	1	-
Legionellosis	-	-	1	-	1	Typhoid fever	-	-	-	-	1
Leishmaniasis	27	5	4	-	1	Typhus fever	-	-	-	-	-
Leprosy	2	-	-	-	-	Urethritis, non-gonococcal	793	758	981	1222	968
Leptospirosis	-	4	-	2	2	Vaccine, adverse event	-	15	24	35	4
Listeriosis	-	-	-	-	-	Varicella, active duty only	108	101	67	67	31
Lyme disease	7	13	18	25	13	Yellow fever	-	-	-	-	-

a. Events reported by March 31, 2002

b. Tri-Service Reportable Events, Version 1.0, July 1998

Source: Reportable Events Surveillance System

**Table 3. Number of reportable events<sup>a</sup> among active duty personnel,  
Air Force medical treatment facilities, 1997-2001**

Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001	Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001
<b>All reportable events</b>	-	-	-	3959	3421						
Amebiasis	-	-	-	1	-	Malaria, falciparum	-	-	-	2	-
Anthrax	-	-	-	-	-	Malaria, malariae	-	-	-	1	-
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	-	-	-	1
Botulism	-	-	-	-	-	Malaria, unspecified	-	-	-	1	-
Brucellosis	-	-	-	-	-	Malaria, vivax	-	-	-	2	3
Campylobacter	-	-	-	36	25	Measles	-	-	-	-	-
Carbon monoxide poisoning	-	-	-	-	-	Meningococcal meningitis	-	-	-	1	-
Chemical agent exposure	-	-	-	-	-	Meningococcal septicemia	-	-	-	-	-
Chlamydia	-	-	-	3031	2813	Mumps	-	-	-	1	2
Cholera	-	-	-	-	-	Pertussis	-	-	-	4	2
Coccidioidomycosis	-	-	-	3	1	Plague	-	-	-	-	-
Cold weather	-	-	-	3	1	Pneumococcal pneumonia	-	-	-	1	-
Cryptosporidiosis	-	-	-	1	2	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	-	-
Dengue fever	-	-	-	-	1	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	-	-	1	-	Rheumatic fever, acute	-	-	-	1	-
Ehrlichiosis	-	-	-	-	-	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	-	-	Rocky Mountain spotted fever	-	-	-	-	-
Filariasis	-	-	-	-	-	Rubella	-	-	-	-	-
Giardiasis	-	-	-	18	16	Salmonellosis	-	-	-	24	16
Gonorrhea	-	-	-	419	312	Schistosomiasis	-	-	-	-	-
H. influenzae, invasive	-	-	-	1	-	Shigellosis	-	-	-	5	9
Hantavirus infection	-	-	-	-	1	Smallpox	-	-	-	-	-
Heat exhaustion	-	-	-	74	23	Streptococcus, group A, inv.	-	-	-	9	-
Heat stroke	-	-	-	1	1	Syphilis	-	-	-	13	9
Hemorrhagic fever	-	-	-	-	-	Tetanus	-	-	-	-	-
Hepatitis A	-	-	-	3	4	Toxic shock syndrome	-	-	-	-	-
Hepatitis B	-	-	-	48	24	Trichinosis	-	-	-	2	1
Hepatitis C	-	-	-	41	13	Trypanosomiasis	-	-	-	-	-
Influenza	-	-	-	156	104	Tuberculosis, pulmonary	-	-	-	1	-
Lead poisoning	-	-	-	-	-	Tularemia	-	-	-	-	-
Legionellosis	-	-	-	1	-	Typhoid fever	-	-	-	-	1
Leishmaniasis	-	-	-	-	-	Typhus fever	-	-	-	-	-
Leprosy	-	-	-	-	-	Urethritis, non-gonococcal	-	-	-	34	19
Leptospirosis	-	-	-	-	-	Vaccine, adverse event	-	-	-	-	-
Listeriosis	-	-	-	-	-	Varicella, active duty only	-	-	-	11	9
Lyme disease	-	-	-	8	8	Yellow fever	-	-	-	-	-

a. Events reported by March 31, 2002

Source: Air Force Reportable Events System

b. Tri-Service Reportable Events, Version 1.0, July 1998

**Table 4. Number of reportable events<sup>a</sup> among active duty personnel,  
Navy medical treatment facilities, 1997-2001**

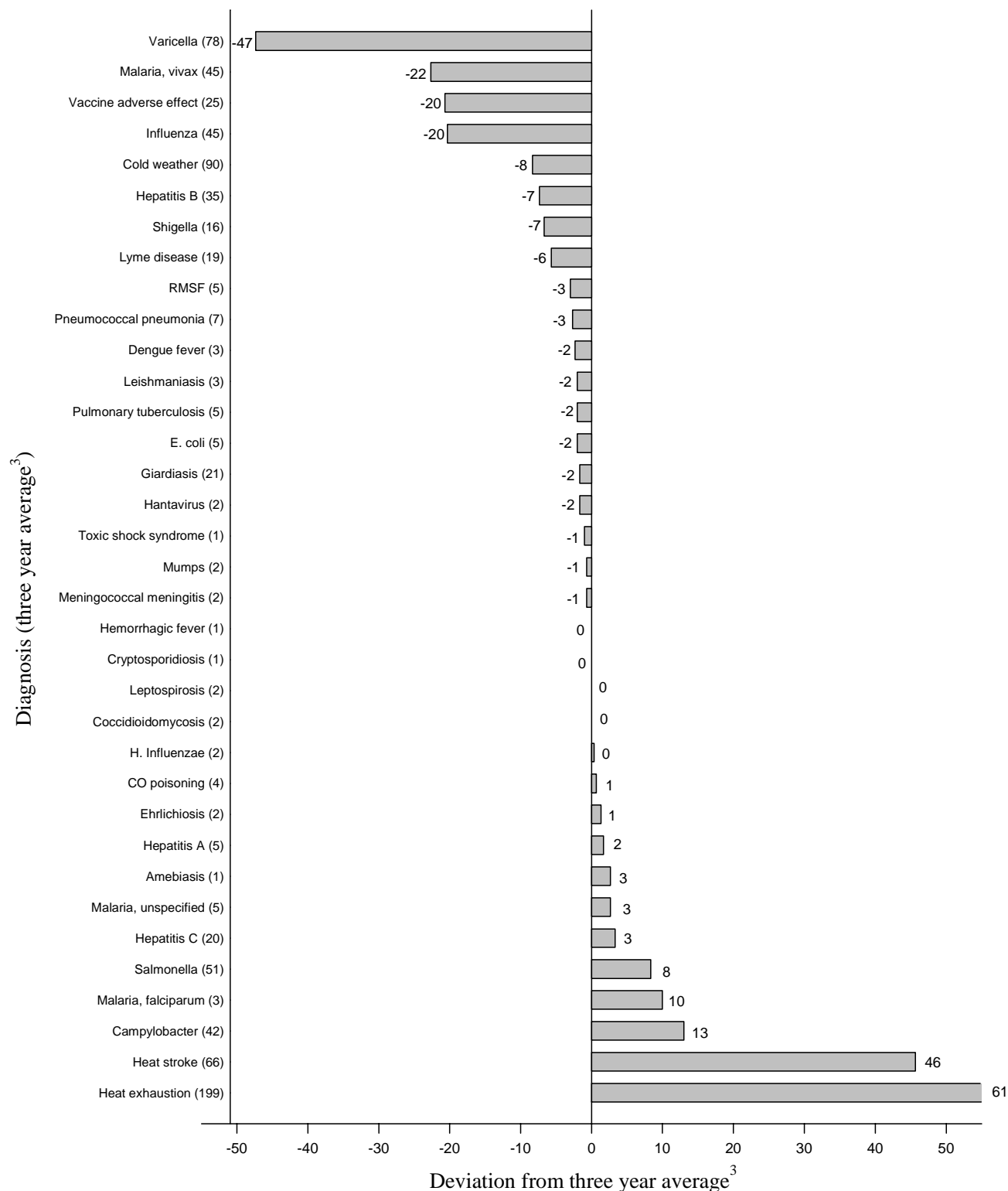
Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001	Diagnosis <sup>b</sup>	1997	1998	1999	2000	2001
<b>All reportable events</b>	-	-	-	2369	2277						
Amebiasis	-	-	-	2	1	Malaria, falciparum	-	-	-	4	1
Anthrax	-	-	-	5	-	Malaria, malariae	-	-	-	-	-
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	-	-	-	-
Botulism	-	-	-	-	-	Malaria, unspecified	-	-	-	4	-
Brucellosis	-	-	-	-	1	Malaria, vivax	-	-	-	1	-
Campylobacter	-	-	-	29	7	Measles	-	-	-	-	-
Carbon monoxide poisoning	-	-	-	-	-	Meningococcal meningitis	-	-	-	2	-
Chemical agent exposure	-	-	-	-	-	Meningococcal septicemia	-	-	-	4	1
Chlamydia	-	-	-	1615	1572	Mumps	-	-	-	-	1
Cholera	-	-	-	-	-	Pertussis	-	-	-	-	-
Coccidioidomycosis	-	-	-	2	12	Plague	-	-	-	-	-
Cold weather	-	-	-	-	1	Pneumococcal pneumonia	-	-	-	3	-
Cryptosporidiosis	-	-	-	-	2	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	-	-
Dengue fever	-	-	-	2	-	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	-	-	2	-	Rheumatic fever, acute	-	-	-	-	1
Ehrlichiosis	-	-	-	-	1	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	4	-	Rocky Mountain spotted fever	-	-	-	4	-
Filariasis	-	-	-	-	-	Rubella	-	-	-	-	-
Giardiasis	-	-	-	9	8	Salmonellosis	-	-	-	7	8
Gonorrhea	-	-	-	565	422	Schistosomiasis	-	-	-	-	-
H. influenzae, invasive	-	-	-	-	-	Shigellosis	-	-	-	2	2
Hantavirus infection	-	-	-	-	-	Smallpox	-	-	-	-	-
Heat exhaustion	-	-	-	10	27	Streptococcus, group A, inv.	-	-	-	3	6
Heat stroke	-	-	-	4	7	Syphilis	-	-	-	16	11
Hemorrhagic fever	-	-	-	-	-	Tetanus	-	-	-	-	-
Hepatitis A	-	-	-	1	-	Toxic shock syndrome	-	-	-	-	-
Hepatitis B	-	-	-	15	7	Trichinosis	-	-	-	-	-
Hepatitis C	-	-	-	8	4	Trypanosomiasis	-	-	-	-	-
Influenza	-	-	-	-	11	Tuberculosis, pulmonary	-	-	-	8	2
Lead poisoning	-	-	-	-	-	Tularemia	-	-	-	-	-
Legionellosis	-	-	-	-	-	Typhoid fever	-	-	-	-	1
Leishmaniasis	-	-	-	-	-	Typhus fever	-	-	-	-	3
Leprosy	-	-	-	-	-	Urethritis, non-gonococcal	-	-	-	23	138
Leptospirosis	-	-	-	-	-	Vaccine, adverse event	-	-	-	2	1
Listeriosis	-	-	-	-	1	Varicella, active duty only	-	-	-	9	13
Lyme disease	-	-	-	4	4	Yellow fever	-	-	-	-	-

a. Events reported by March 31, 2002

Source: Navy Disease Reporting System

b. Tri-Service Reportable Events, Version 1.0, July 1998

**Figure 1. Number of reportable events<sup>1</sup> among active duty personnel during 2001<sup>2</sup> compared to the three year average<sup>3</sup> of 1998-2000, Army medical treatment facilities.**



1. Sexually transmitted diseases were excluded.

2. Reported by March 31, 2002.

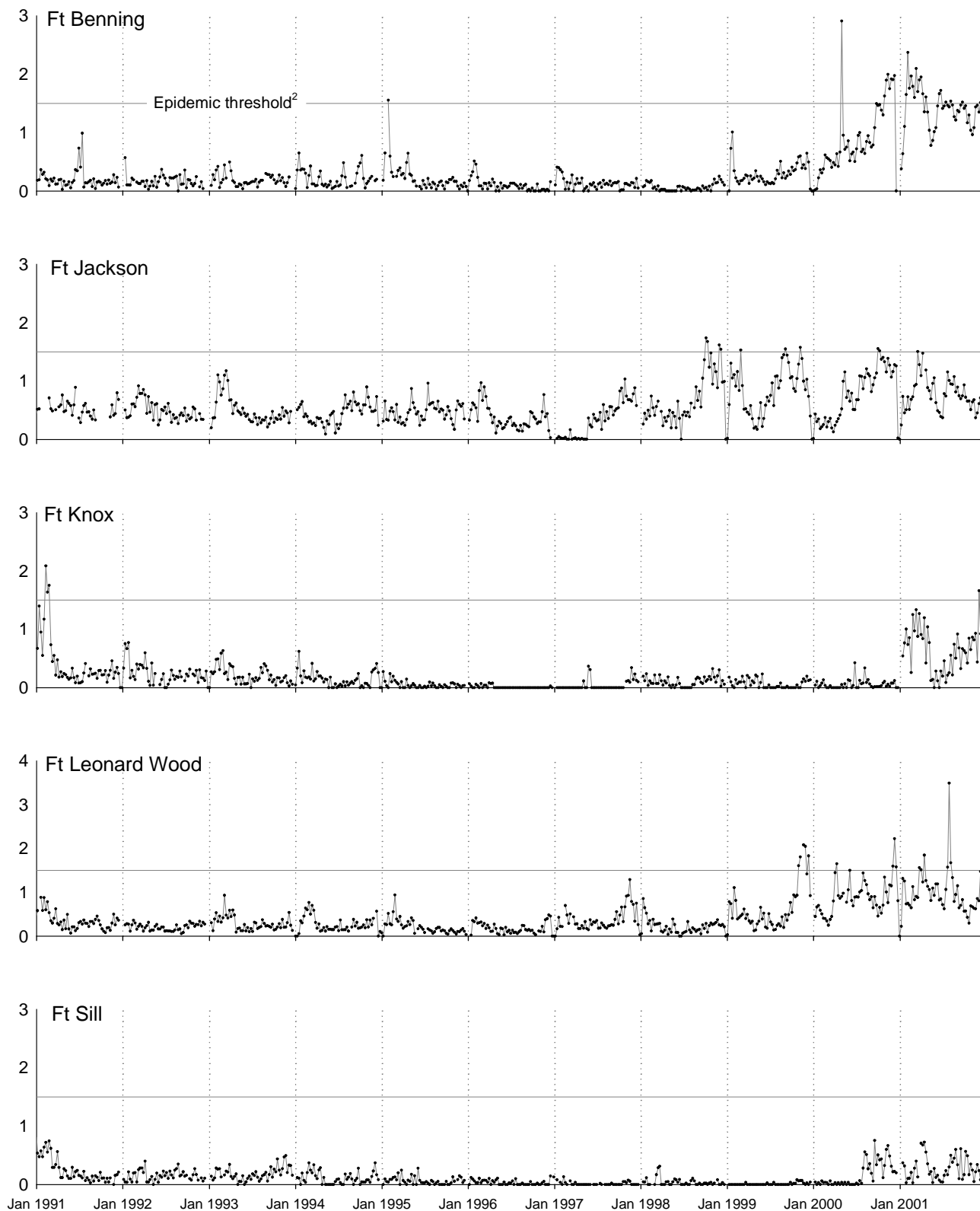
3. Comparisons given for diseases that had a total three year incidence of at least 3 cases. All averages are rounded to the nearest integer.

Source: Army Reportable Medical Events System

## Acute Respiratory Disease Surveillance

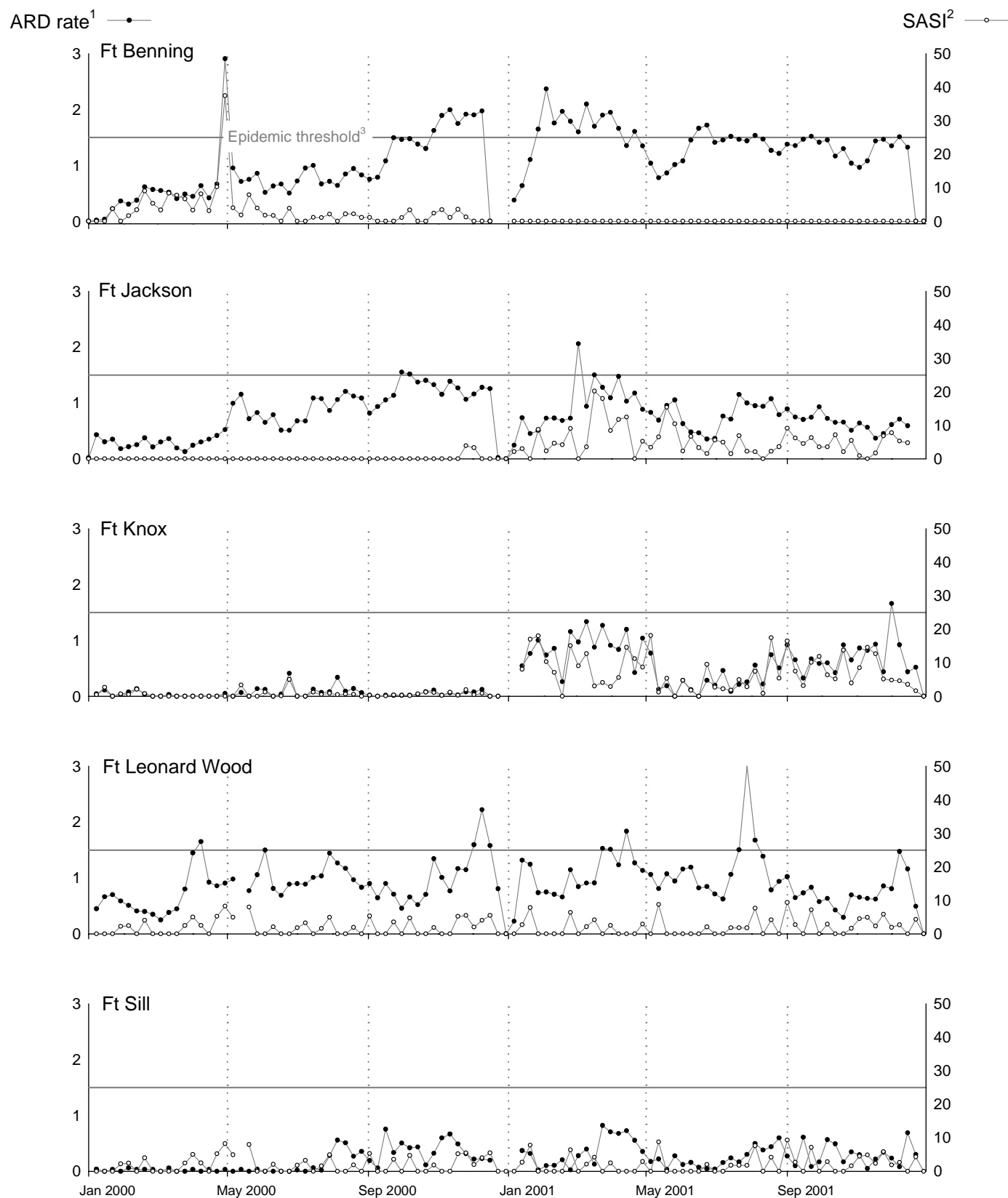
**Figure 1. Acute respiratory disease (ARD), by week, Army basic training centers, 1990-2001.**

ARD rate<sup>1</sup>



1. ARD rate = cases per 100 trainees per week.
2. ARD rate  $\geq 1.5$  for 2 weeks defines epidemic.

**Figure 2. Acute respiratory disease (ARD) and streptococcal pharyngitis surveillance, by week, US Army basic training centers, 1999-2001.**



1. ARD rate = cases per 100 trainees per week.

2. SASI (Strep ARD surveillance index) = (ARD rate)(rate of Group A beta-hemolytic strep).

3. ARD rate  $\geq 1.5$  or SASI  $\geq 25.0$  for 2 weeks defines epidemic.



## Relative Burdens of Selected Illnesses and Injuries, US Armed Forces, 2001

Illnesses and injuries are “burdens” to the US Armed Forces to the extent that they degrade the health, fitness, and operational readiness of servicemembers and demand resources for diagnosis, treatment, rehabilitation, and disability compensation. Arguably, prevention efforts (with associated resources) should target illnesses and injuries that account for the largest “morbidity burdens.” Of course, assessments of relative burdens of specific illnesses and injuries can vary greatly depending on the classification schemes and/or measures that are used. For example, assessments of illnesses and injuries based on numbers of related inpatient and outpatient encounters will identify different sets of “most important” diagnoses. Similarly, rankings based on numbers of medical encounters attributable to certain illnesses and injuries—rather than numbers of individuals affected by them—may prioritize conditions differently.

For this report, we modified the classification system used in the Global Burden of Disease Study.<sup>1</sup> In general, this system groups ICD-9-CM coded diagnoses that have common pathophysiologic or etiologic bases and/or significant international health policymaking importance. Our modifications included breaking out injury-specific diagnoses (as in the monthly installation-specific injury reports produced by AMSA<sup>2</sup>) and other diagnoses with particular military importance (e.g., mental disorders). For the analysis, we combined servicemembers’ inpatient and outpatient experiences for 2001 to estimate the numbers of medical encounters for, and the numbers of servicemembers affected by, each illness- and injury-specific subgroup. We also quantified hospital bed days associated with diagnostic subgroups to indicate their relative severities and health care costs.

**Medical encounters.** Upper respiratory infections accounted for the most medical encounters among active duty servicemembers in 2001. “All other musculoskeletal disorders,” knee injuries, and back/abdomen injuries were the second through fourth-ranked sources of medical encounters, respectively. “Injuries and poisonings,” mental disorders, and musculoskeletal disorders accounted for more medical

encounters than any other categories of diagnoses.

**Individuals affected.** More servicemembers received medical care for upper respiratory infections than any other condition. Abnormalities of visual acuity (i.e., disorders of refraction and accommodation), “all other musculoskeletal disorders,” “all other signs and symptoms,” and “unspecified injuries” affected the next highest numbers of servicemembers. “Injuries and poisonings” and “respiratory infections” affected more servicemembers than any other major categories of diagnoses.

**Hospital bed-days.** During 2001, deliveries of newborn infants and complications of pregnancy accounted for the first and fourth most hospital bed-days, respectively. Mood, adjustment, substance abuse, and psychotic disorders accounted for the second, third, fifth, and sixth most hospital bed-days, respectively. Thus, inpatient care for mental disorders and for pregnancies and deliveries accounted for more hospital bed-days than other major categories.

**Relationships of burden indicators.** In general, the number of individuals affected by particular conditions was strongly correlated with the number of medical encounters attributable to the conditions (linear regression, total medical encounters =  $1.77 \times$  individuals affected,  $R^2=0.85$ ). On the other hand, the number of hospital bed-days attributable to conditions was not strongly correlated with either the number of individuals affected by or the number of medical encounters attributable to the conditions. Thus, relatively unique insights into morbidity burdens are gained by (1) hospital bed-days attributable to particular conditions and (2) either the number of individuals affected by or the total number of medical encounters for particular conditions.

**Editorial comment:** The summaries presented here document that “burdens” attributable to various illnesses and injuries vary based on criteria used for grouping diagnoses and on methods used for quantifying burdens. For example, in this summary, mental disorders and pregnancy-related conditions

accounted for relatively large numbers of hospital bed days but relatively fewer total medical encounters. Thus, based on hospital usage alone, these categories would be attributed with the highest morbidity burdens. On the other hand, upper respiratory infections and abnormalities of visual acuity affected very large numbers of servicemembers but accounted for relatively few hospital bed-days. Clearly, assessments of morbidity burdens significantly vary based on the morbidity measures that are used.

During calendar year 2001, there were few illnesses or injuries that affected large numbers of servicemembers, caused large numbers of medical encounters, and accounted for large numbers of hospital bed-days. Diagnostic subgroups that were in the top 25 in all three morbidity burden-related categories were injuries (to the knee, back/abdomen, foot/ankle, arm/shoulder, and head/neck) and non-specific groups (i.e., "all others") of musculoskeletal disorders, signs and symptoms, infectious and

parasitic diseases, genitourinary disease, digestive disease, and skin diseases.

Assessments of morbidity burdens using various measurement criteria may be informative and useful to military medical planners, policymakers, and preventive medicine/public health practitioners.

*Data analysis and report by Karen E. Campbell, MS, Analysis Group, Army Medical Surveillance Activity.*

#### References

1. The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Murray, CJ and Lopez, AD, eds. Harvard School of Public Health (on behalf of the World Health Organization and The World Bank), 1996, 120-2.
2. Army Medical Surveillance Activity. Monthly installation injury surveillance reports: surveillance of injuries and their impacts at the installation level, US Armed Forces. *MSMR* 2001, 7(8), 7-9.

**Table 1. Morbidity burdens of selected diseases and injuries, US Armed Forces, 2001**

Category	Medical encounters <sup>1</sup>		Individuals affected <sup>2</sup>		Hospital bed days	
	No.	Rank	No.	Rank	No.	Rank
<b>Injury and poisoning</b>						
Knee	393,821	(3)	118,761	(8)	4,824	(17)
Back and abdomen	321,091	(4)	125,284	(7)	7,386	(9)
Unspecified injury	301,432	(7)	176,964	(5)	2,847	(27)
Foot and ankle	277,873	(9)	118,447	(9)	4,661	(18)
Arm and shoulder	276,912	(10)	82,130	(12)	4,888	(16)
Hand and wrist	134,458	(15)	64,507	(15)	2,367	(29)
Head and neck	120,298	(17)	59,353	(16)	7,572	(8)
Leg	67,920	(26)	26,655	(34)	5,002	(15)
Environmental	20,762	(48)	16,231	(44)	1,224	(43)
Other injury from external causes	20,546	(49)	13,986	(46)	200	(83)
Other complications, not otherwise specified	8,040	(71)	6,243	(65)	5,856	(10)
Poisoning, nondrug	2,817	(89)	1,957	(80)	390	(69)
Poisoning, drugs	1,664	(100)	1,361	(88)	2,007	(34)
Other dislocations and sprains (excl. ankle/foot)	12	(126)	12	(126)	0	(122)
Other superficial injury	2	(127)	2	(127)	0	(122)
All other injury	6,193	(76)	4,722	(71)	300	(73)
<b>Mental disorders</b>						
Substance abuse disorders	296,667	(8)	30,508	(28)	12,583	(5)
Mood	125,311	(16)	29,577	(32)	22,805	(2)
Adjustment	98,109	(18)	33,987	(26)	20,452	(3)
Anxiety	46,780	(33)	15,394	(45)	1,962	(35)
Tobacco dependence	25,345	(45)	12,021	(55)	0	(122)
Personality	19,476	(51)	7,273	(62)	4,047	(21)
Psychotic	9,562	(67)	1,665	(83)	10,085	(6)
Somatoform	4,971	(78)	1,890	(81)	697	(55)
All other mental disorders	45,968	(35)	20,241	(40)	3,098	(25)
<b>Musculoskeletal disease</b>						
Other back problems	141,002	(14)	68,937	(14)	1,875	(36)
Osteoarthritis	11,869	(65)	7,406	(61)	392	(68)
Other knee disorders	9,796	(66)	5,225	(70)	710	(54)
Other shoulder disorders	8,651	(70)	5,257	(69)	358	(71)
Rheumatoid arthritis	2,381	(94)	968	(94)	40	(108)
All other musculoskeletal disease	417,100	(2)	181,642	(3)	5,768	(12)
<b>Respiratory infections</b>						
Upper respiratory	463,017	(1)	306,385	(1)	1,382	(39)
Lower respiratory	61,116	(28)	45,757	(23)	4,071	(20)
Otitis media	35,695	(40)	28,273	(33)	48	(104)
<b>Sense organ diseases</b>						
Refraction/accommodation	307,896	(5)	234,842	(2)	0	(122)
Glaucoma	12,006	(64)	7,938	(60)	21	(113)
Cataracts	1,649	(101)	1,091	(92)	7	(119)
All other sense organ diseases	193,604	(11)	125,805	(6)	835	(51)
<b>Signs and symptoms</b>						
Respiratory and chest	84,405	(23)	55,855	(18)	2,550	(28)
Abdomen and pelvis	79,428	(24)	52,416	(21)	2,195	(31)
All other signs and symptoms	301,625	(6)	179,987	(4)	5,336	(13)

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

**Table 1. (Continued) Morbidity burdens of selected diseases and injuries,  
US Armed Forces, 2001**

Category	Medical encounters <sup>1</sup>		Individuals affected <sup>2</sup>		Hospital bed days	
	No.	Rank	No.	Rank	No.	Rank
<b>Infectious and parasitic disease</b>						
Unspecified viral infection	93,051	(21)	74,461	(13)	606	(60)
STDs	35,279	(41)	25,891	(35)	1,083	(47)
Diarrheal disease	24,073	(46)	20,839	(38)	610	(59)
Chlamydia	7,929	(72)	6,489	(64)	6	(120)
Tuberculosis	3,806	(83)	2,607	(76)	253	(80)
Hepatitis B and C	3,803	(84)	1,740	(82)	55	(102)
Bacterial meningitis	882	(107)	626	(99)	304	(72)
Malaria	350	(113)	211	(111)	178	(86)
Intestinal nematode infection	282	(115)	265	(108)	0	(122)
Tropical	141	(119)	88	(117)	26	(111)
All other infectious and parasitic diseases	154,300	(13)	95,631	(11)	3,534	(23)
<b>Skin disease</b>						
Contact dermatitis	49,282	(31)	39,192	(25)	56	(101)
Sebaceous gland diseases	46,342	(34)	30,190	(29)	47	(106)
All other skin disease	190,349	(12)	114,039	(10)	5,847	(11)
<b>Genitourinary disease</b>						
Other urethra/urinary tract disorders	41,694	(36)	29,615	(31)	256	(79)
Female genital pain	17,702	(56)	11,939	(56)	551	(62)
Menstrual disorders	17,450	(57)	12,767	(51)	420	(66)
Other breast disorders	16,649	(58)	8,881	(59)	467	(64)
Kidney stones	12,327	(63)	5,270	(68)	1,055	(48)
Nephritis and nephrosis	3,543	(85)	1,371	(86)	617	(58)
Benign prostatic hypertrophy	1,779	(98)	1,260	(90)	52	(103)
All other genitourinary disease	94,022	(19)	54,207	(19)	4,328	(19)
<b>Respiratory disease</b>						
Allergic rhinitis	93,448	(20)	56,197	(17)	12	(117)
Asthma	37,803	(38)	18,077	(43)	689	(56)
COPD	15,959	(60)	13,554	(49)	234	(81)
Chronic sinusitis	14,118	(61)	9,793	(57)	197	(84)
All other respiratory disease	34,731	(42)	20,685	(39)	3,844	(22)
<b>Digestive disease</b>						
Other gastroenteritis and colitis	64,731	(27)	52,515	(20)	1,133	(45)
Esophagus disease	33,625	(43)	20,087	(41)	1,655	(37)
Inguinal hernia	14,118	(61)	6,626	(63)	761	(53)
Appendicitis	3,990	(81)	2,217	(78)	5,171	(14)
Peptic ulcer	1,781	(97)	1,298	(89)	426	(65)
Cirrhosis	1,708	(99)	821	(96)	145	(90)
All other digestive disease	71,065	(25)	44,173	(24)	9,735	(7)
<b>Endocrine disorders</b>						
Obesity	39,477	(37)	19,573	(42)	102	(93)
Lipoid metabolism disorders	37,540	(39)	24,368	(37)	36	(110)
Diabetes mellitus	18,431	(52)	4,447	(72)	587	(61)
All other endocrine disorders	47,186	(32)	24,983	(36)	2,079	(33)
<b>Cardiovascular disease</b>						
Essential hypertension	60,025	(29)	29,784	(30)	177	(87)
Ischemic	6,328	(75)	2,873	(75)	1,582	(38)
Cerebrovascular	2,517	(91)	830	(95)	1,116	(46)
Inflammatory	1,561	(102)	700	(98)	291	(76)
Rheumatic	645	(112)	508	(103)	61	(98)
All other cardiovascular disease	50,294	(30)	30,825	(27)	3,522	(24)

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

**Table 1. (Continued) Morbidity burdens of selected diseases and injuries,  
US Armed Forces, 2001**

Category	Medical encounters <sup>1</sup>		Individuals affected <sup>2</sup>		Hospital bed days	
	No.	Rank	No.	Rank	No.	Rank
<b>Headache</b>	90,798	(22)	49,190	(22)	924	(50)
<b>Maternal conditions</b>						
Pregnancy complications	30,964	(44)	13,755	(48)	14,530	(4)
Delivery	19,750	(50)	12,053	(54)	39,259	(1)
Ectopic/miscarriage/abortion	7,711	(73)	4,355	(73)	1,357	(40)
Puerperium complications	1,521	(103)	1,058	(93)	488	(63)
<b>Other neoplasms</b>						
Benign skin neoplasm	18,072	(55)	13,878	(47)	9	(118)
Lipoma	9,147	(68)	5,917	(67)	118	(91)
Uterine leiomyoma	2,514	(92)	1,370	(87)	1,304	(42)
All other neoplasms	18,076	(54)	12,588	(52)	2,106	(32)
<b>Neurologic conditions</b>						
Other mononeuritis - upper and lower limbs	6,726	(74)	3,674	(74)	76	(96)
Epilepsy	4,434	(79)	1,514	(85)	189	(85)
Multiple sclerosis	2,493	(93)	460	(104)	363	(70)
Parkinson disease	167	(118)	46	(119)	0	(122)
All other neurologic conditions	20,935	(47)	9,668	(58)	2,323	(30)
<b>Malignant neoplasms</b>						
Lymphomas and multiple myeloma	5,145	(77)	820	(97)	1,191	(44)
Melanoma and skin cancer	4,212	(80)	2,244	(77)	62	(97)
Breast	3,515	(86)	421	(105)	165	(88)
Testicular	2,566	(90)	512	(102)	681	(57)
Leukemia	2,131	(95)	170	(112)	931	(49)
Colon and rectum	1,857	(96)	263	(109)	405	(67)
Thyroid	1,503	(104)	323	(106)	300	(73)
Prostate	1,178	(105)	320	(107)	297	(75)
Brain	803	(108)	114	(113)	223	(82)
Mouth and oropharynx	790	(110)	247	(110)	48	(104)
Trachea, bronchus, and lung	701	(111)	95	(115)	150	(89)
Bladder	317	(114)	108	(114)	45	(107)
Stomach	266	(116)	34	(122)	89	(95)
Ovarian	213	(117)	54	(118)	61	(98)
Liver	139	(120)	18	(124)	108	(92)
Cervical	132	(121)	43	(120)	59	(100)
Pancreas	101	(123)	14	(125)	37	(109)
Esophagus	82	(124)	29	(123)	26	(111)
Uterine	58	(125)	43	(120)	17	(114)
All other malignant neoplasms	3,910	(82)	1,192	(91)	1,341	(41)
<b>Oral conditions</b>						
Dental caries	3,273	(88)	1,636	(84)	15	(116)
Periodontal disease	796	(109)	559	(101)	16	(115)
All other oral conditions	16,289	(59)	13,114	(50)	2,960	(26)
<b>Congenital anomalies</b>						
Congenital heart disease	1,033	(106)	589	(100)	291	(76)
All other congenital anomalies	18,313	(53)	12,275	(53)	779	(52)
<b>Nutritional deficiencies</b>						
Iron-deficiency anemia	3,513	(87)	2,159	(79)	98	(94)
Protein energy malnutrition	130	(122)	95	(115)	4	(121)
All other nutritional deficiencies	8,797	(69)	6,132	(66)	264	(78)

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

**Table 1. Demographic characteristics of active duty members, US Armed Forces, 2001**

Characteristics	Army		Navy		Air Force		Marine Corps	
	Pop.	% total soldiers	Pop.	% total sailors	Pop.	% total airmen	Pop.	% total marines
<b>Total</b>	474,364	100.0	368,756	100.0	348,587	100.0	171,789	100.0
<b>Gender</b>								
Men	401,303	84.6	316,895	85.9	282,023	80.9	161,405	94.0
Women	73,061	15.4	51,861	14.1	66,564	19.1	10,384	6.0
<b>Age (years)</b>								
< 20	44,705	9.4	35,264	9.6	23,879	6.9	27,070	15.8
20-24	153,118	32.3	117,219	31.8	95,044	27.3	80,375	46.8
25-29	98,166	20.7	69,932	19.0	65,983	18.9	27,780	16.2
30-34	74,476	15.7	55,436	15.0	56,205	16.1	15,682	9.1
35-39	61,448	13.0	53,737	14.6	64,385	18.5	12,997	7.6
40-44	28,424	6.0	25,254	6.8	31,561	9.1	5,674	3.3
45-49	10,317	2.2	9,146	2.5	9,070	2.6	1,739	1.0
50-54	3,151	0.7	2,319	0.6	2,143	0.6	438	0.3
55-59	492	0.1	373	0.1	285	0.1	32	0.0
> 59	67	0.0	76	0.0	32	0.0	1	0.0
<b>Race/Ethnicity</b>								
White non-hispanic	277,182	58.4	230,963	62.6	257,109	73.8	115,493	67.2
Black non-hispanic	124,978	26.3	69,758	18.9	56,485	16.2	25,839	15.0
Hispanic	40,987	8.6	34,790	9.4	17,357	5.0	22,255	13.0
Asian/Pacific Islander	14,994	3.2	23,170	6.3	9,120	2.6	4,290	2.5
Native American/Alaskan	3,952	0.8	7,033	1.9	1,659	0.5	1,633	1.0
Other	12,270	2.6	3,042	0.8	6,856	2.0	2,278	1.3
<b>Marital Status</b>								
Single	202,920	42.8	195,414	53.0	112,123	32.2	91,529	53.3
Married	251,585	53.0	173,342	47.0	211,670	60.7	74,607	43.4
Other	19,859	4.2	0	0.0	24,794	7.1	5,653	3.3
<b>Education</b>								
High school or less	361,511	76.2	303,865	82.4	228,336	65.5	150,236	87.5
Some college	28,252	6.0	16,010	4.3	39,578	11.4	4,093	2.4
Bachelors	55,251	11.6	29,820	8.1	41,702	12.0	14,350	8.4
Masters	19,414	4.1	12,744	3.5	30,693	8.8	2,693	1.6
Doctorate	9,935	2.1	6,318	1.7	8,277	2.4	417	0.2
<b>Grade</b>								
Enlisted								
E1-E4	221,444	46.7	159,400	43.2	130,931	37.6	103,255	60.1
E5-E9	177,256	37.4	155,801	42.3	149,602	42.9	50,508	29.4
Officer								
O1-O3 (W1-W3)	47,251	10.0	32,344	8.8	38,779	11.1	11,884	6.9
O4-O9 (W4-W5)	28,413	6.0	21,212	5.8	29,275	8.4	6,141	3.6

**Table 2. Occupations of active duty members, US Armed Forces, 2001**

Characteristics	Army		Navy		Air Force		Marine Corps	
	Pop.	% total soldiers	Pop.	% total sailors	Pop.	% total airmen	Pop.	% total marines
<b>Total</b>	474,364	100.0	368,756	100.0	348,587	100.0	171,789	100.0
<b>Enlisted</b>								
Infantry, seamen, gun crews	104,493	22.0	56,150	15.2	30,245	8.7	53,992	31.4
Electronic equip repair	25,577	5.4	47,427	12.9	24,240	7.0	9,260	5.4
Communications, intelligence	40,791	8.6	26,762	7.3	23,116	6.6	10,188	5.9
Health care	29,571	6.2	24,658	6.7	20,760	6.0	3,565	2.1
Technical and allied support	12,861	2.7	7,259	2.0	10,726	3.1	0	0.0
Funct support, admin	67,455	14.2	38,180	10.4	63,958	18.3	26,609	15.5
Electric/mech equip repair	55,412	11.7	84,913	23.0	61,382	17.6	23,189	13.5
Craftworkers	7,742	1.6	15,561	4.2	12,067	3.5	3,449	2.0
Service, supply handlers	47,442	10.0	14,271	3.9	13,943	4.0	18,567	10.8
Non-occupational	7,356	1.6	19	0.0	20,095	5.8	4,944	2.9
<b>Officers</b>								
General officers and executives	378	0.1	2,234	0.6	943	0.3	495	0.3
Tactical operations	21,597	4.6	12,354	3.4	22,042	6.3	6,007	3.5
Intelligence	3,836	0.8	1,692	0.5	3,542	1.0	697	0.4
Engineering and maintenance	6,909	1.5	7,380	2.0	8,568	2.5	1,837	1.1
Scientists, professionals	4,512	1.0	3,029	0.8	5,254	1.5	449	0.3
Health care	12,311	2.6	7,643	2.1	12,026	3.4	0	0.0
Administrators	4,103	0.9	4,154	1.1	4,859	1.4	1,341	0.8
Supply, allied specialists	5,954	1.3	2,184	0.6	6,244	1.8	2,063	1.2
Non-occupational	16,065	3.4	12,884	3.5	4,575	1.3	5,138	3.0





Commander  
U.S. Army Center for Health Promotion  
and Preventive Medicine  
5158 Blackhawk Road  
ATTN: MCB-DC-EDM  
Aberdeen Proving Ground, MD 21010-5403

STANDARD  
U.S. POSTAGE  
PAID  
APG, MD  
PERMIT NO. 1

OFFICIAL BUSINESS

**Executive Editor**

LTC R. Loren Erickson, MD, DrPH

**Senior Editor**

LTC Mark V. Rubertone, MD, MPH

**Editor**

John F. Brundage, MD, MPH

**Assistant Editor**

Andrew Male

**Service Liaisons**

LTC Arthur R. Baker, MD, MPH (USA)

LCDR Jeffrey Brady, MD, MPH (USN)

Lt Col John Stein, DVM, MPH (USAF)

**Senior Analyst**

Sandra Lesikar, PhD

*The Medical Surveillance Monthly Report (MSMR) is prepared by the Army Medical Surveillance Activity, Directorate of Epidemiology and Disease Surveillance, US Army Center for Health Promotion and Preventive Medicine (USACHPPM).*

*Data in the MSMR are provisional, based on reports and other sources of data available to AMSA.*

*Inquiries regarding content or material to be considered for publication should be directed to: Editor, Army Medical Surveillance Activity, Building T-20, Room 213 (Attn: MCHB-TS-EDM), 6900 Georgia Avenue, NW, Washington, D.C. 20307-5001. E-mail: editor@amsa.army.mil*

*Views and opinions expressed are not necessarily those of the Department of Defense.*